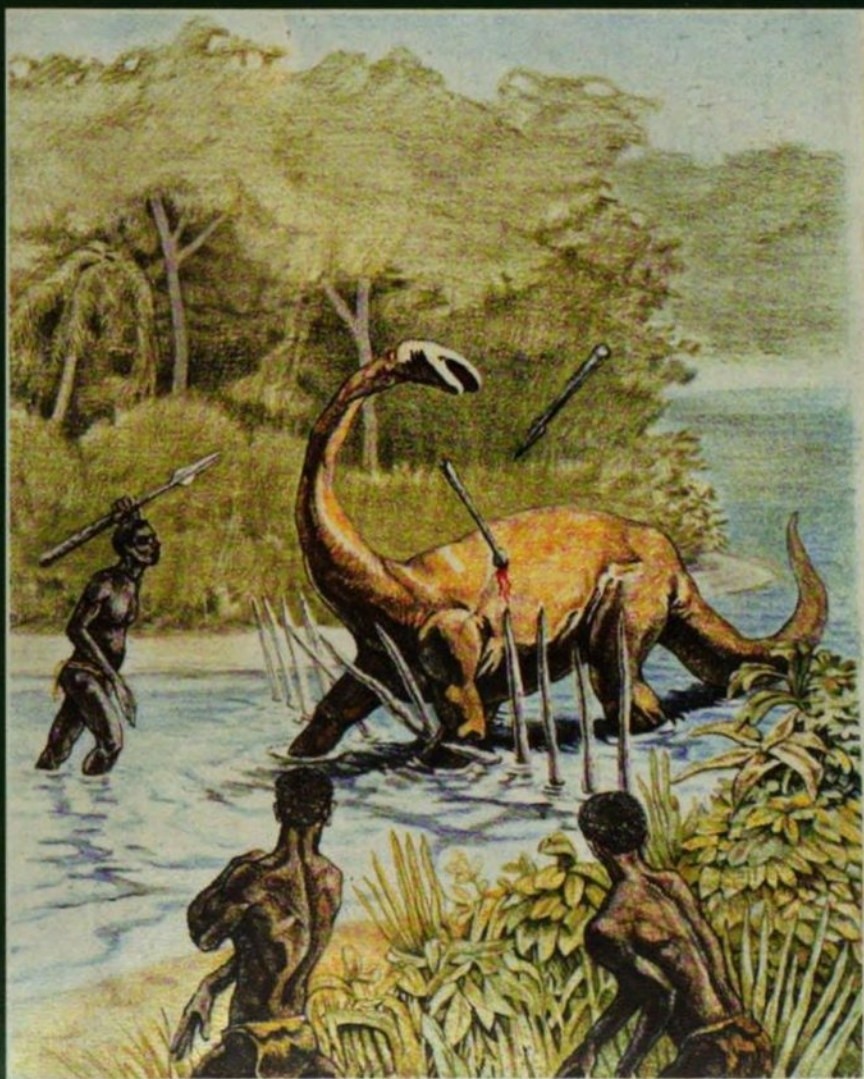


Dr Roy P. Mackal

A Living Dinosaur?

In Search of Mokele-Mbembe



with a
Foreword
by
Bernard
Heuvelmans

E.J. Brill

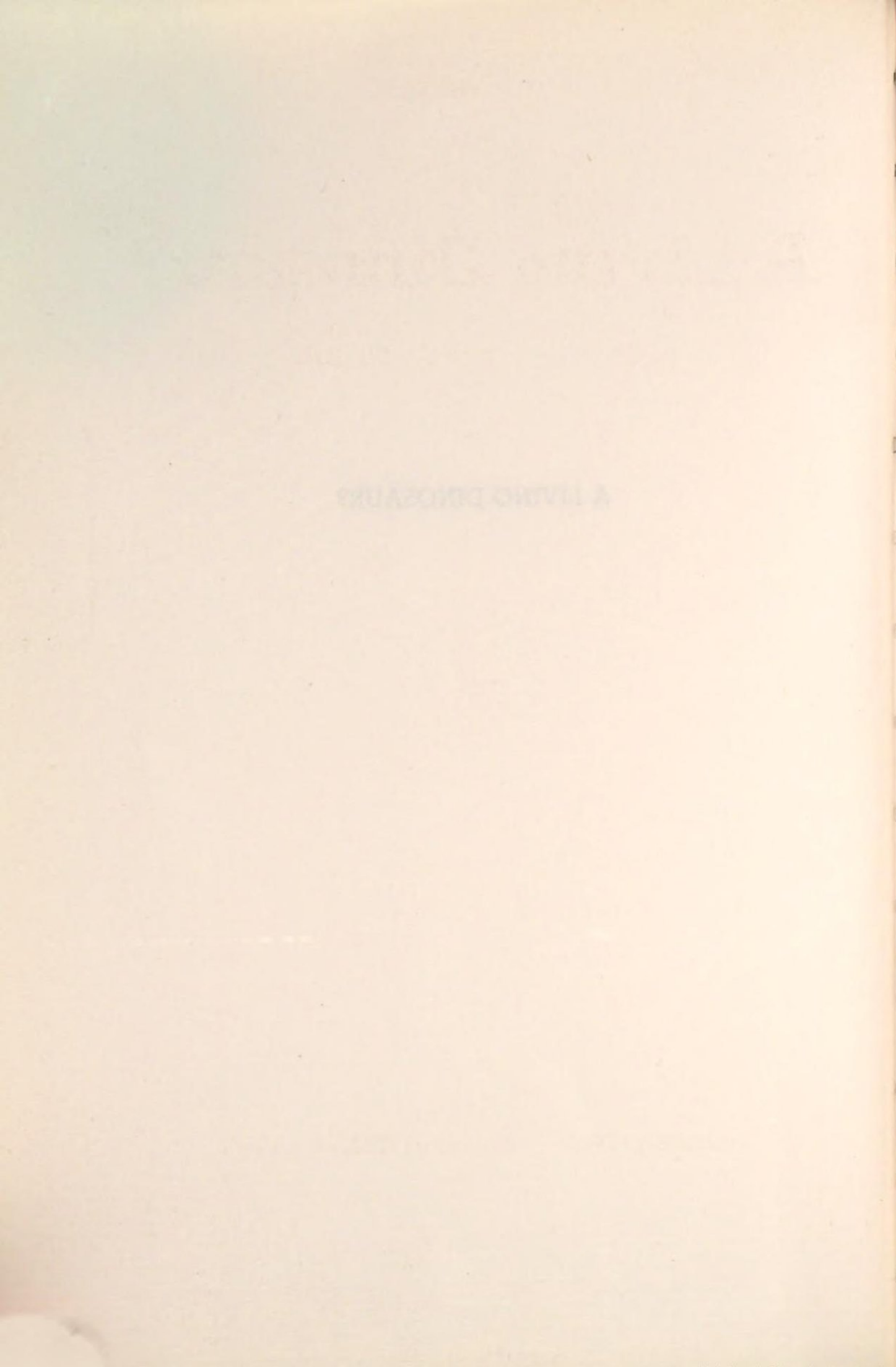
'The *Mokele-mbembe* is undoubtedly the zoological craze of the 1980s. Just possibly it could become the greatest zoological discovery of the twentieth century—indeed of any century. As the search for this well concealed creature is still unresolved this book cannot answer the question, 'Is *Mokele-mbembe* a living dinosaur?'; but it should help us to appreciate that the question is worth asking. This book is at once topical, exceptional, highly educational, suited to thrill us, to hold us spellbound, and to leave us breathless. Can the general reader ask for more?'

Bernard Heuvelmans

A LIVING INTRODUCTION

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A LIVING DINOSAUR?



ROY P. MACKAL

A Living Dinosaur?

In Search of Mokele-Mbembe



E.J. BRILL

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To Bernard Heuvelmans whose life-long study of unknown animals has provided a magnificent fund of information, invaluable to cryptozoological research; to Sandy and Gene Thomas; and to the entire Congolese government for help, encouragement, and co-operation.

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Foreword

Roll up! Roll up!, I am tempted to shout—to catch your attention. This is an important book, important for at least six good reasons. It is about cryptozoology. It is not about the Loch Ness monster, nor about Bigfoot. It discusses the possible survival until our own times of dinosaurs. It tells of a gallant knight in search of a dreadful dragon. Its action takes place in the heart of darkest Africa. It is an unfinished saga.

This intriguing book shows us that it may require moral and physical courage as well as intellectual acumen to undertake research in cryptozoology (the study of “hidden animals” on scientific principles). It gives a vivid account of the search for a particular creature not yet listed in our zoological catalogues, from the preliminary groping through the maze of literature impinging on cryptozoology (my own card catalogue of that literature far exceeds twenty thousand references and my library contains at least 225 published volumes devoted to it) to the actual hunt in the field—or, rather, the swamp—for that creature. The book also shows that luck, good and bad, plays a large part in searches of this kind.

Furthermore, it does not just deal with still undescribed species of recent mammals or reptiles; it deals with dinosaurs and suggests that, of all fossil creatures, they could have survived until now. Ay, there's the rub, for it is well known that the last dinosaurs became extinct about 65 million years ago, at the end of the Mesozoic Era. This is held to be such an absolute and indisputable truth that two of the favourite questions of science writers is why have dinosaurs vanished and what wiped them off the face of the earth? A plethora of scientific hypotheses, usually of the most extravagant nature, from constipation to a glut of comets, has been put forth over the years to account for this unquestionable extinction. Not a single hypothesis is in the least satisfactory. No wonder; none of the

scientists responsible for such lucubrations first asked this very simple question: how could any inner cause or catastrophic impact wipe out selectively a whole group of very diverse animals—two entire orders of reptiles no less—and leave unscathed some of their close relatives, such as the crocodiles and tortoises, not to mention many other living beings sharing their various habitats?

Roy Mackal asks a much more pertinent question than the traditional ones: why should all dinosaurs be extinct? Could not at least one genus survive today? After all, we still have the tuatara of the order Rhynchocephalia (which pre-dates the dinosaurs), the coelacanth as a sole survivor of the Devonian order Crossopterygia, and the nautilus group of which several species still thrive in tropical waters as representatives of an order dating from the early Palaeozoic Era. And I am only mentioning here some of the most famous “living fossils”, there being others innumerable. I would even go so far as to say that they are, in a way, common and familiar. Indeed, we live our lives among them; we wash ourselves down with the skeletons of sponges, we eat oysters and mussels, we live in houses teeming with spiders, and we use crushed horse-shoe crabs as fertiliser on our fields. As Mackal’s investigations have led him to conclude that a less familiar living fossil, a kind of sauropod dinosaur, seems to be lurking in equatorial Africa, it just may help to put an end to one of the most persistent and aggravating worries of the zoological community: the explanation of the alledged extinction of dinosaurs. This alone makes the present book outstandingly interesting.

Incidentally, why do science writers never ask what they ask about dinosaurs in connection with much more extensive groups of animals, whole classes indeed, which are similarly supposed to be extinct, such as trilobites or graptolites? Fairly obviously it is not for scientific reasons. Trilobites, for instance, played as significant a part in the oceans as did dinosaurs on the continents. No, the answer is an emotional one, because dinosaurs and some of their relatives—sauropterygians and pterosaurs—are the present embodiment of the old dragon archetype. And to feed myths, to

speak the language of mythopoeic thought, amounts to stirring up directly our most intimate feelings, emotions, fears, or lusts by the use of suggestive symbols. This explains why children are still enthralled by fairy tales or stories about mermaids, satyrs or unicorns, or by their contemporary often transparent versions in disguise. Even adults cannot resist this kind of hidden persuasion. Why do you think *The Hobbit* or *The Lord of the Rings* have been such tremendous literary successes? First of all it is because Professor J.R.R. Tolkien was a most erudite folklorist who knew how to make all his characters and plots conform to the universal and everlasting patterns of myth. Whether die-hard rationalists like it or not, it is for no other essential reason that dinosaurs, alias dragons, impersonators of evil in our western world, are as popular amongst scientists as they are amongst laymen. In a way to claim a belief in the extinction of dinosaurs is rather like claiming to have killed a dragon—in each case the claimant may be considered a hero.

This brings me again to my fourth reason for recommending this book. Who, indeed, can resist the spell of a story telling of the long and indefatigable search for a most elusive dragon by a valiant knight who is intent, not upon killing it but upon its capture—if only on film? Come, come, the thrill is provided by the adventure and its attendant hazards, by the obstinate fight, the overcoming of implacable enemies and the anticipation of the outcome—not, in this instance, a mindless butchery.

This enchanting tale is flavoured, furthermore, with magic and fascination, for it unfolds in the darkest and least familiar part of Africa. The main events are enacted in places scarcely attainable without wading knee-deep, sometimes waist-deep, through insalubrious swamps or flooded forest for hours on end—the actors were certainly not airlifted to their destination. Needless to emphasise that the stage of this remarkable drama is poorly explored and very thinly populated.

There is even a seventh reason why this book is important, but it has to do with the philosophy of science rather than science itself. Roy Mackal's work may help us to overhaul and thus understand

the intricate mechanisms of any scientific discovery because the long story of the present one is unfolded here before it is finally achieved. It is usually after a discovery is made that one is able to reconstruct the way it was generated and how it developed, which events and actions combined to bring it to fruition. Here, for once, discovery is caught in the act. Now we must examine how Roy Mackal came to hunt his particular dragon.

The hypothesis of dinosaur survival was originally promulgated in 1909 by the celebrated German "King of Zoos", Carl Hagenbeck, who happened to be exceptionally well informed about the world's megafauna, assisted by the numerous animal catchers who worked for him. Thanks to some striking accounts of sightings in Africa and to persistent traditions of Africans and despite a few sensational hoaxes, the argument in favour of surviving dinosaurs gained more and more support among certain adventurous or romantic naturalists. A first synthesis of the question, which had become very involved in the meantime, was attempted by the British science writer Frank W. Lane as well as by Captain William Hichens of the Intelligence and Administrative Services of East Africa. During the Second World War it was developed further and brilliantly buttressed by the American science writer of German origin, Willy Ley. It was later summarised and somewhat sensationalised by Ivan T. Sanderson, a science writer of Scottish origin, who contributed an article to the *Saturday Evening Post* in 1948, entitled "There Could be Dinosaurs".

At this stage one was being led to imagine that huge reptiles, escapees from the Mesozoic Era and often said to be blood-thirsty, were roaming about over most countries of the African continent, from the Gulf of Guinea to Mozambique and from Ethiopia to Namibia, even reaching the interior of temperate South Africa. A few daring but foolhardy explorers were thus to waste much time and money looking for these monstrous relics, since it is certainly more difficult to find a brontosaurus over the whole range of tropical Africa than it is to find the proverbial needle in a haystack. A correct cryptozoological analysis of the vast amount of collected data and a search for further evidence was obviously required; and

this is what I attempted in my book *Les Derniers Dragons d'Afrique* (*Africa's Last Dragons*), published in French in 1978. It had gradually occurred to me that most reported cases of apparently unknown animals of amphibious habits dwelling in the dark continent which could be broadly classified as "dragons" were quite irrelevant to the question of dinosaur survival. They concerned either outsized pythons or crocodiles or undescribed species of sirenians or fishes, such as lungfishes and catfishes, or even of large sabre-toothed cats apparently survivors from Pleistocene times. In fact the only described animals which had at least the outer appearance of sauropod dinosaurs seemed to be confined within three regions very distant from each other: the middle Zambezi River; the west bank affluents of the middle Congo River, spreading mainly over the People's Republic of the Congo and the Central African Republic, slightly overflowing also the bordering areas of Gabon, Cameroun and Chad; finally, the vast marshes in the interior of Benin.

As the most recent reports from the present Zambia dated from the nineteenth century, however, it may well be that the animals in question had since become extinct in the Zambesi River basin. Because the rumours from Benin (then Dahomey) all originated from a single person they could only be accepted provisionally and with the utmost caution, statistical evidence being the best foundation for cryptozoological claims. Consequently, the only region in Africa where one could entertain a hope of meeting sauropod-like animals was the crescent-shaped area stretching out from the northern Congo to southern Chad.

Significantly, the information collected throughout this region came precisely from the most trustworthy sources. First there was the scientific report of the German Likouala-Congo Expedition of 1913-14, conducted by Hauptmann Freiherr von Stein zu Lausnitz. In this unpublished document the captain had given a very detailed account of the *Mokele-mbembe* as conveyed to him by the riverside villagers of the lower Ubangi and Sanga Rivers. Then I received vital information in communications given to me privately by Lucien Blancou, Chief Game Inspector of the French

Colonies, who while studying the fauna of equatorial West Africa from 1929 to 1945, had picked up from the inhabitants of the Ubangi-Chari region many traditions as well as first-hand eyewitness testimonies about similar amphibious animals of large size, both long-necked and long-tailed. The German account was published in Germany by science writer Wilhelm Bölsche in a booklet entitled *Drachen* (1929) which was devoted to the dragon legend; subsequently this account was disseminated in the English-speaking world by Willy Ley in his book *The Dodo, the Lungfish and the Unicorn* (1948). Lucien Blancou's revelations were disclosed in my own book *On the Track of Unknown Animals* (1958), published in a dozen different languages.

It was the information contained in my later, more thoroughly documented book on the dragons of Africa, however, that I conveyed in 1978 to James H. Powell, Jr., with whom I had been in correspondence for a decade and who was determined to solve the problem of the surviving dinosaurs in the field. Since 1973 he had already made investigations in Gabon and Cameroun, unfortunately on the strength of a report I had discovered was quite unreliable and which led him to places much too far from the most likely ones. So I urged him repeatedly to concentrate his efforts around the Sanga and Likouala Rivers in the People's Republic of the Congo or around the west bank affluents of the Ubangi River in the Central African Republic.

This well-considered advice was later communicated, especially through the medium of my book on the African dragons, to Roy Mackal when he and Powell decided to join forces in the search for living dinosaurs. Consequently they turned their attention towards the Congo early in 1980 and the cornucopia of information they gathered diligently from among the indigenous people there confirmed that they were, indeed, on the right track.

Curiously enough the achievement I am proudest of in this lengthy and painstaking guidance work, performed dry-shod in libraries and laboratories, is not of a cryptozoological character but is rather referable to "cryptophytology" (having coined the word "cryptozoology" in the late 1950s I don't see why I should hesitate

to create another word here and now in the late 1980s to denominate "the science of hidden plants"). Baron von Stein's report had mentioned that the *Mokele-mbembe*'s favourite food was "a kind of liana with large white blossoms, with a milky sap and apple-like fruits". Thanks to the expertise of my old friend General-Pharmacist Armand Bouquet, former director of research at the ORSTOM in Brazzaville, I had been able to state in my 1978 book that "it could be recognised as one of the *Landolphia*'s". Two years later the American team collected specimens of the plant, known locally as *malombo*, which was pointed out to them as being the preferred food of the suspected dinosaur. These samples were identified at the Botany Department of the University of Chicago as *Landolphia mannii*. If I had been able to give such a correct prognosis of the plant in question, owing to the accuracy of the German explorer's account, may I be justified to think that I could be correct also about the identity of the animal which was said to feed on it? Its identity, of course, can only be settled once and for all by a close or prolonged examination of one of the animals. From the bottom of my heart I hope it will be the privilege of Roy Mackal to conduct that examination, and this is why.

I have known Roy for over a quarter of a century. We had been exchanging cryptozoological information since 1960 but did not meet until 1982 when the International Society of Cryptozoology was founded in Washington D.C. Roy knows his zoology to his fingertips: for me this is the essential prerequisite to solving any zoological—or cryptozoological—problem, even if it does sound like a self-evident truth. He and I do not always agree on particular points—I would start worrying if we did—but as far as Mokele-mbembe is concerned agreement between us is total. He has thoroughly studied the literature of the subject, collected as much circumstantial evidence as possible, and has briefed his case with a master hand. He has the true scientific spirit compounded of inquisitiveness, insight, open-mindedness, scepticism, and rigour to which he brings flair and imagination. Browse among the pages of this book and you will not find the slightest rash statement on any of them. The author never pontificates, denies nothing off-hand, and is never cock-sure about anything. All his opinions,

even his apparently craziest hypotheses, are phrased with the greatest caution. Always he keeps himself as distant from the delirium of the lunatic fringe as from the dogmatism of established science.

To crown it all Roy has made several penetrating incursions in the field—and what a field it is!—to familiarise himself with the environment, to look for concrete evidence, to check minor details, to trace and question more witnesses and to perfect his strategy. Without in the least wishing to minimise James Powell's courageous and repeated investigations and some interesting probes by others Roy Mackal, unquestionably, may justly claim to be the most complete cryptozoologist to have tackled the problem of the possible survival of the dinosaur in Africa. He deserves to be the one who will solve that problem definitively. Unfortunately the solution is just as likely to rest with some adventurous brat who may not be able to tell a horse from a cow but knows exactly where and how to look for a possible dinosaur. But this brat would not be the true discoverer of the *Mokele-mbembe* but merely the last—and weakest—link in a long chain of countless efforts, beginning with Hagenbeck's bold supposition and of which the other main links bear the names Stein zu Lausnitz, Bölsche, Ley, Blancou, Heuvelmans, Powell, and Mackal.

The *Mokele-mbembe* is undoubtedly the zoological craze of the 1980s. Just possibly it could become the greatest zoological discovery of the twentieth century—indeed of any century. As the search for this well concealed creature is still unresolved this book cannot answer the question, "Is *Mokele-mbembe* a living dinosaur?"; but it should help us to appreciate that the question is worth asking, whether or not an answer is forthcoming. This book is at once topical, exceptional, highly educational, suited to thrill us, to hold us spellbound, and to leave us breathless. Can the general reader ask for more?

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1

"Monstrous Animal" or Living Dinosaur?

Africa! For two centuries the name has conjured up for westerners an image of a dark continent filled with strange beasts, primitive peoples, vast unexplored deserts, swamps, and jungles. In the last fifty years, most African nations have become independent, each striving to modernise and catch up with twentieth-century industrialised nations. Indeed, many of the wilder areas have now been transformed into managed game reserves full of "tame" wild animals appearing on cue for curious tourists who stay in first-class luxury hotels in modern cities like Nairobi.

But progress has not permeated the entire continent. In a region known as the Likouala, just north of the equator, lie some of the most formidable jungle swamps on the face of the globe. Part of a former French colony and now known as the République Populaire du Congo, the Likouala encompasses about 140,000 square kilometres (55,000 square miles) of mostly unexplored swamp and rain forest. To be sure, the French, during their colonial rule, made excursions up the major rivers. And a few intrepid European explorers also penetrated the area, bringing back intriguing tales of terrible pygmies and amazing animal life.

There were even stories of animals believed to be relics surviving from the distant past when the earth was young—dinosaurs, to be specific. But how could this be possible? After all, hasn't the earth's climate, even the shape and location of continents, changed drastically in the last 200 million years? The answer is yes, as every schoolchild now learns. Approximately 225 to 195 million years ago, in the Triassic period, the present-day continents of Africa, South America, India, Australia, and Antarctica were all part of a great, single, southern land mass named Gondwana by geophysical scientists. Then, this great land mass began to come

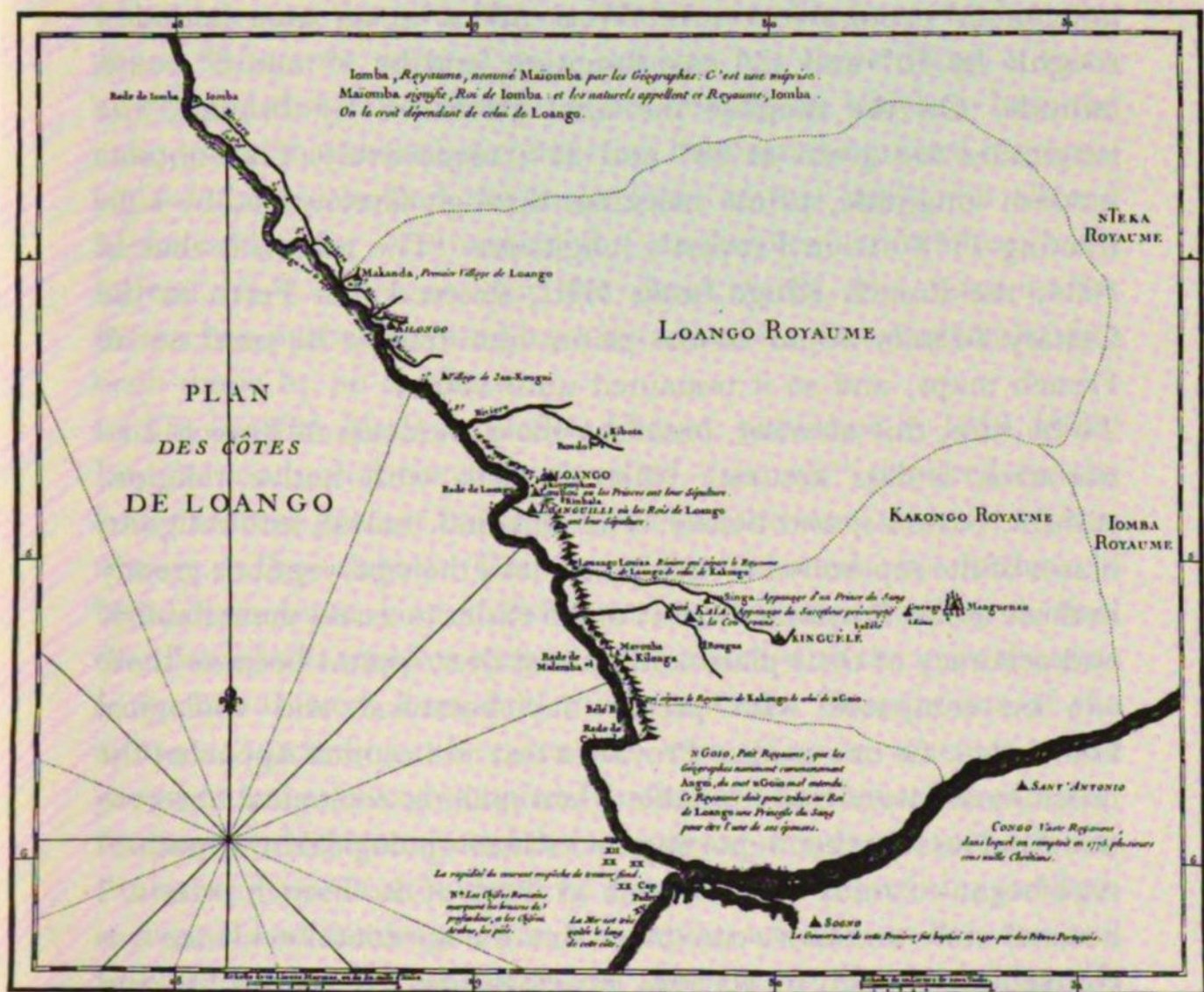
apart. By the time the dinosaurs dominated the earth, 135 to 64 million years ago, Africa, like a gigantic Noah's ark, had become separated from the other land masses. Though surrounded by water, it continued to straddle the equator.

One of the most exciting things about Africa is that, at least since the end of the Cretaceous period, 65 million years ago, the Congo basin has not undergone further climatic and geophysical changes. There have been no glaciations, no inundations, mountain-building episodes, earthquakes or other cataclysmic changes that might have disrupted the continuity of plant and animal life.

Animals evolve and survive because they adapt to changing environments. Conversely, when conditions remain stable for extended periods, some well-adapted species continue to survive and even flourish with very little physical and behavioural alteration. And that is what we find in the central West African jungle-swamps where, for example, crocodiles have persisted almost unchanged over the past 65 million years. What other ancient creatures might still lurk in this vast expanse of seemingly changeless, ageless, largely unexplored primeval forest?

It was for the sake of making an objective (admittedly romantic) study of past reports of just such unknown animals that James H. Powell, Jr., a crocodile specialist, and I mounted an expedition to the very heart of the Congo in early 1980. But first, a bit of the history that lured us there...

During the latter half of the eighteenth century French priests tried to propagate the Catholic faith in central Africa, particularly in what is now Gabon, Cameroon, and the Congo. Apparently, these Catholic missionaries had a little time left over from God's work and were able to take stock of their surroundings and what they contained. While passing through the forest, the French missionaries observed and reported the track of an animal "which was not seen but which must have been monstrous: the marks of the claws were noted on the ground, and these formed a print about three feet in circumference. The arrangement of the impressions indicated that the animal was walking, not running; the distance between the footprints measured seven to eight feet."



1. Map of the Kingdom of Loango and Kakongo.

This map depicts the area between 10° to 13° east longitude and 3° to 6° south latitude (approximately 114,000 square kilometres) which was penetrated by French Catholic priests during the early part of the 18th century. It is located southeast of the Sikouala swamps (16° to 18° east longitude and 0° to 3° north latitude) we have been exploring

This remarkable passage referring to a huge, clawed beast (the French priests called it “monstrous animal”) is sandwiched between factually correct accounts of the elephant and the lion contained in a volume entitled *Histoire de Loango, Kakonga, et Autres Royaumes d’Afrique* written by a French priest, Abbé Liévain Bonaventure Proyard, and originally published in 1776. The book contains a sober and realistic description of the life and times of the

indigenous peoples of central West Africa in an area bounded roughly by 10° and 13° east longitude and by 3° and 6° south latitude. On the map of the area published by Proyart, the longitudes are given as 28° and 31° , respectively. One obtains modern longitude, prime meridian through Greenwich, by subtracting $17^{\circ}4'$ from Proyart's longitudes. (The reason is that in 1634, the French King, Louis XIII, decreed that Ferro in the Canary Islands would be the prime meridian to be used on all French maps; and so it remained until 1800.)

To be sure, this account, based on the documents of French missionaries, is less accurate when it deals with native religion, culture, customs, and beliefs. The personal, moral, and religious biases of the reporters inevitably coloured their perceptions greatly in those areas. Fortunately, it is much easier to assess the reliability and accuracy of their plant and animal descriptions because these can be compared with present-day botanical and zoological knowledge. As one studies Proyart's text, it becomes apparent the missionaries were quite reliable when making zoological observations and less so when reporting socio/anthropological information. As I began to study reports, such as those of the French priests, I became more and more convinced that the anecdotal evidence was compelling enough to warrant investigation. At risk of life and limb, as well as at considerable expense, I have now been twice to the Congo to search the often-treacherous jungle swamp for the mysterious "monstrous animal", known among the Africans as *Mokele-mbembe*. As a result of findings gathered during two scientific African expeditions I feel more strongly than ever that some of the anecdotal reports do refer to real, unknown animals. Moreover, I accept the possibility that when a *Mokele-mbembe* specimen is finally captured, it may well prove to be a sauropod, or herbivorous dinosaur—a living member of that race of mighty animals considered to be extinct from the face of the earth for millions of years.

Returning again to the report of the monstrous footprints, Dr Bernard Heuvelmans, a contemporary French zoologist, calculates that the animal making the prints must have been of a size some-

where between that of a hippopotamus or a rhinoceros and an elephant. Of course none of those animals has claws. Now, it must be granted that this reference is not enough on which to base the assumption that there is a connection between the animal responsible for the tracks and the main topic of this book, the alleged Mokele-mbembe (pronounced mo-kay-lee mmmbem-bee). Indeed, if it were not for the claw marks, the missionaries themselves probably would have dismissed the footprints as having been made by an elephant.

In *The Lungfish, the Dodo, and the Unicorn*, published in 1948, Willy Ley contends that the animal called "sirrush" depicted on the Ishtar Gate of ancient Babylon is one and the same with the *Mokele-mbembe*. The Ishtar Gate was constructed by order of Nebuchadnezzar, king of Babylon. Ley was impressed by the fact that fierce bulls (rimi or reems) are depicted with the grim dragons (sirrush), as were lions and other animals. Descriptions of the animals, including the sirrush, were known over a wide geographical area and remained unchanged for thousands of years. Further, both the reem and the sirrush are mentioned in the Bible: "the reem, which should not be trusted, even though his strength is great," and the dragon that was kept in a temple in Babylon and worshipped by the inhabitants of that city until it was allegedly killed by Daniel. Ley points out that the reem was identified as the urus, which was extinct in Mesopotamia at the time, but lived on in Europe for two more millennia. To the Babylonians he was a "monster from afar" and, in Ley's opinion, the same probably applied to the sirrush.

Aside from the sirrush depicted on the Ishtar Gate, we may have an actual written description of our strange animal that dates from about 565 B.C., making it older than the Ishtar Gate. I am referring to the description of the behemoth found in the Bible in the 40th Chapter of Job. The date of the book of Job is uncertain, but estimates place it between 700 and 2000 B.C. The relevant text runs as follows:

Behold now Behemoth, which I made with thee; he eateth grass as an ox. Lo now his strength is in his loins, and his force is in the navel

of his belly. He moveth his tail like a cedar: the sinews of his stones are wrapped together. His bones are as strong pieces of brass, his bones are like bars of iron. He is the chief of the ways of God: he that made him can make his sword to approach unto him. Surely the mountains bring him forth food, where all the beasts of the field play. He lieth under the shady trees, in the covert of the reed, and fens. The shady trees cover him with their shadow; the willows of the brook compass him about. Behold, he drinketh up a river, and hasteth not: he trusteth that he can draw Jordan into his mouth. He taketh it with his eyes: his nose pierceth through snares.

Although variations in translation exist, they do not affect materially the premise we are suggesting. Biblical scholars, both Hebrew and Christian, have never come up with a satisfactory explanation for the meaning of these passages. Most commentators attempt to identify the reference with the ox, the elephant, the hippopotamus, or the crocodile—or they reject a literal interpretation altogether, seeking an allegorical meaning where clearly there is none. More correctly, some Hebrew scholars have considered the creature to be a monstrous and unidentifiable animal.

A discussion of this matter was published in 1691 in Latin. The work was translated into English by Edmund Goldsmid in 1886, and privately printed in Edinburgh under the title *Un-Natural History of Myths of Ancient Science*. The original author of the section on the behemoth was George Caspard Kirschmayer, author of the first six tracts in the book, who was born at Uffenheim, in Franconia, in 1635. He was a professor at Wittenberg and a Fellow of the Royal Societies of London and Vienna. Kirschmayer attempted to relate the behemoth's identity to the elephant, which is only slightly less absurd than the attempts by scholars to explain the creature as an ox. Obviously, the only connection with the ox is that both animals are herbivorous. The behemoth's tail is compared to a cedar, which suggests a sauropod. This identification is reinforced by other factors. Not only the behemoth's physical nature, but also its habits and food preferences are compatible with the sauropod's. Both live in swampy areas with trees, reeds and fens (a jungle swamp). Indeed, the identification of the biblical behemoth as a sauropod dinosaur provides excellent corre-

spondence between the descriptive features in the biblical text and the characteristics of these dinosaurs as inferred from the fossil record. (Readers who wish to pursue the approach of biblical scholars as to the identity of behemoth should consult the book *Job* by Marvin H. Pope, where they will find an extensive discussion of the matter.)

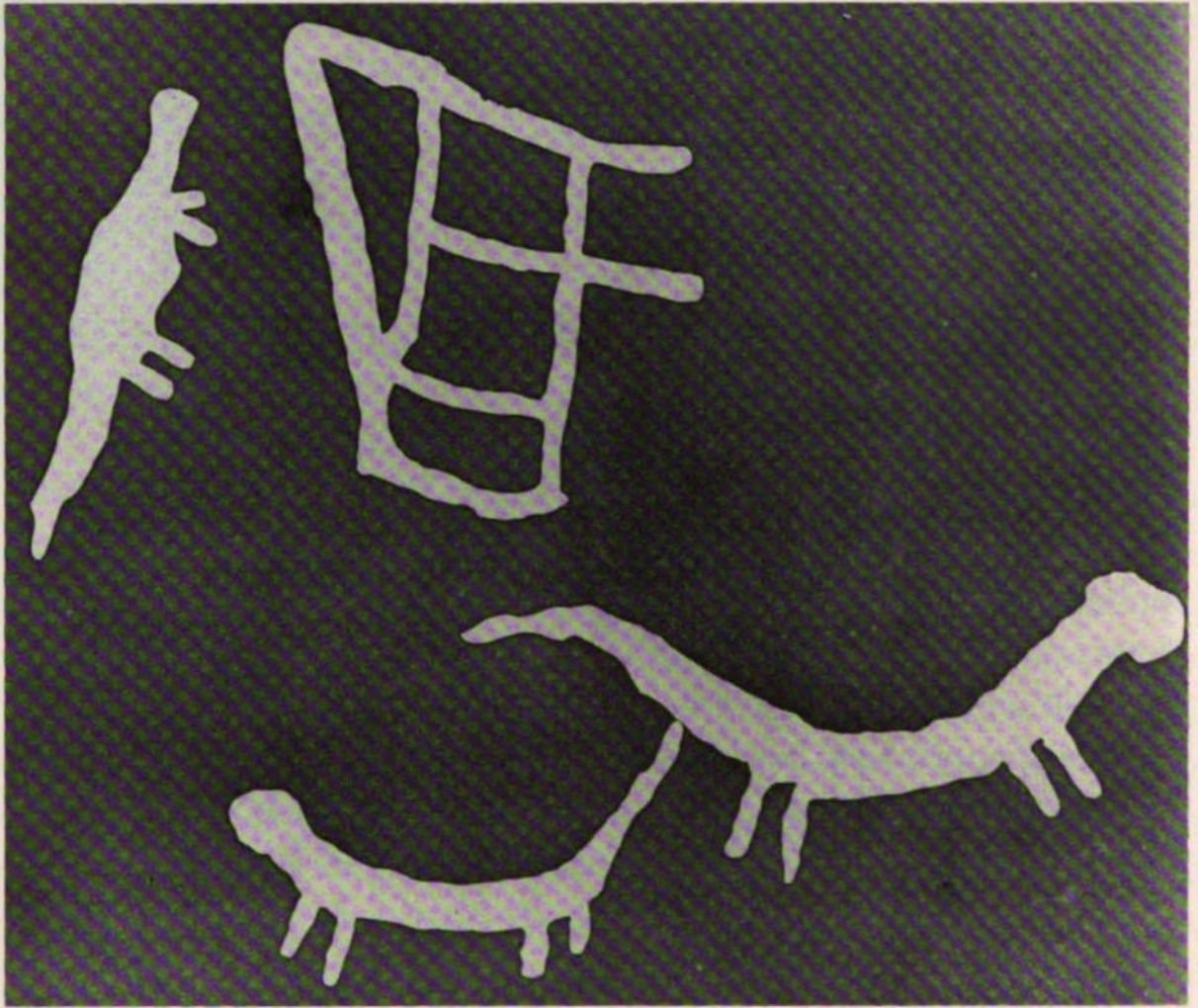
There is still other early evidence in the form of African cave paintings and petroglyphs made prior to 1776, although not discovered until much later. These depictions are occasionally labelled as "unknown animals," but more often as "mythical animals" by modern social anthropologists, in spite of the fact that the paintings include perfectly normal settings and known animals. In short, there is no justification in this context for labelling unknown animals as mythical, except perhaps our own ignorance of what these creatures may have been.

Additional information about rock paintings comes from Trader Horn, about whom we will shortly learn more. He wrote:

That amali. I told you I've seen a drawing of him in those Bushman caves. I chiselled one out whole once and gave it to President Grant for a souvenir. He naturally took a great curiosity in the West Coast, seeing that the Civil War he'd been so busy over had ruined an old trade there.

Aye, the little fellers that drew those creatures, and manacled slaves and so on I told you about, were not ordinary savages. They sure were paleolithic men from the North. They were remembering things, on those walls. Processions and so on. I bought a nice ivory from them once, covered with leopards and elephants. Nice little fellers, round about four feet and a little over. Shy as a buck, until they'd had a good look at you. A living example of the survival of the fittest. Most gifted conjurors in the world. Use flint for weapons. Most harmless race, but they've had to flee from the French rule same as others. They've gone into the Cameroons for safety. Even the Arabs don't know the back of the Cameroons.

At the time Trader Horn wrote, African rock paintings and carvings were not nearly so well known as they are today. There now exist many published volumes in which a great variety of African art from many areas is reproduced. A case in point is an illustration accompanying an article by J. Desmond Clark entitled "The



2. Rock Paintings from a cave at Nachikufu near Mpika, Northern Rhodesia.

Rock Paintings of Northern Rhodesia and Nyasaland," published in *Rock Art of Central Africa*, edited by Roger Summers, 1959. Figure 52 of that book reproduces a painting in dirty white from a cave at Nachikufu near Mpika, Northern Province, Northern Rhodesia, depicting three long-necked, long-tailed, four-legged creatures. Clark, to his credit, describes them as curious, crocodile-like figures, not as "mythical animals." What these creatures are is unclear, but they certainly are not crocodiles. The head is distinctly separated from the thinner neck region.

In *Die Bilderstrasse Ostafrikas* Ludwig and Margit Kohl-Larsen (1958), one finds a number of interesting reproductions of cave art. Kohl-Larsen and his wife gathered a most instructive collection of reproductions of African cave art during the 1934-36 German African Expedition to the former German colony of German East

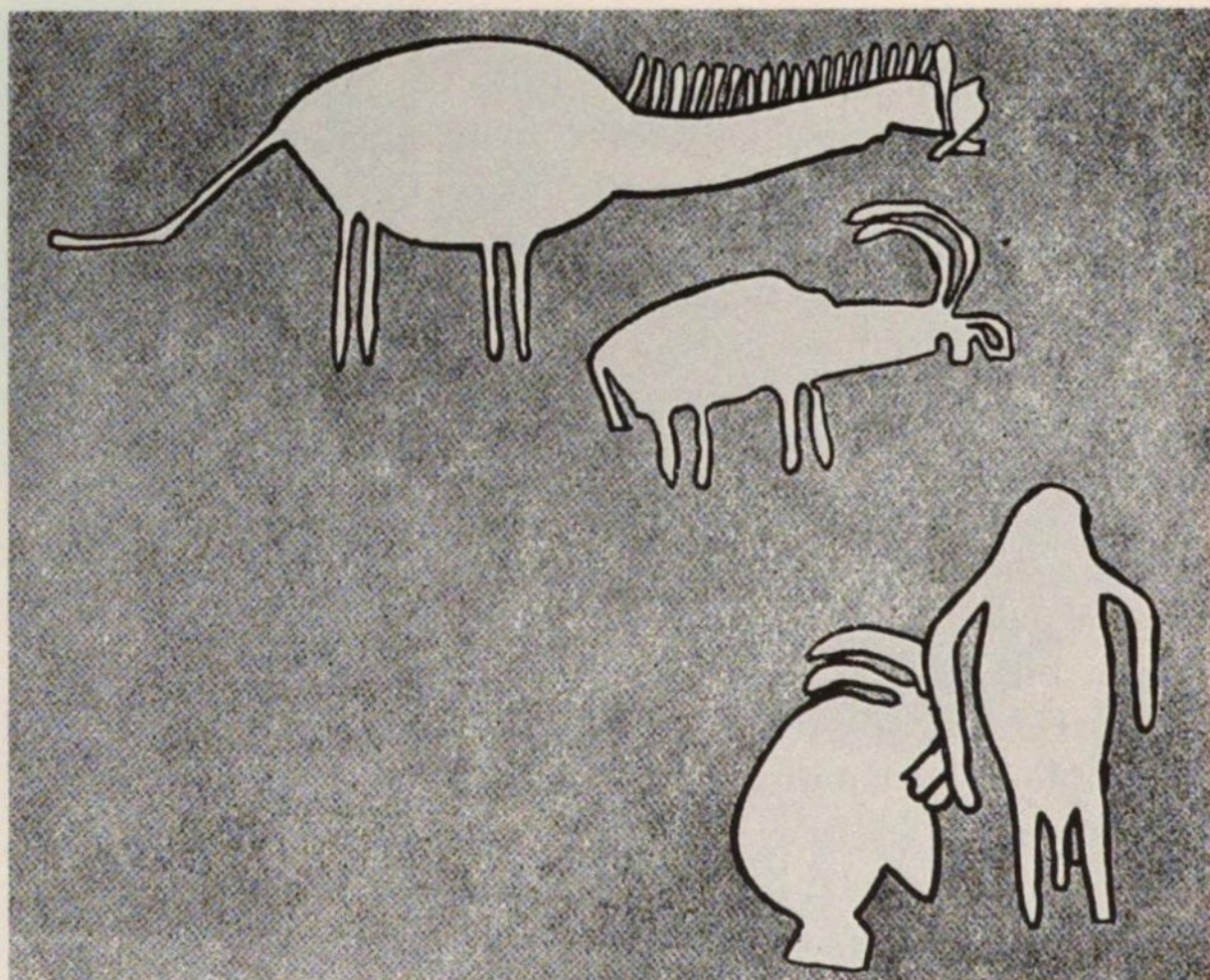
Africa, present-day Tanganyika. Picture 9 of their book shows, among other things, a strange animal. The Kohl-Larsens write that it reminds one of some kind of mythical animal and note the mane or ridge clearly shown on the back of the long neck. The tail is long and thin, attached to a bulbous body bearing four legs. Again, what it may be we cannot say, except that it definitely is not a giraffe.

These two examples will suffice to make the point that, as Trader Horn claimed, there exists cave rock art that could represent an unknown, long-necked, long-tailed, four-legged animal. This evidence should not be taken as being more than suggestive because positive identification or conclusions certainly cannot be drawn. But the evidence cannot be dismissed.

Trader Horn's real name was Alfred Aloysius Smith. Although he claimed to be born thirteen miles outside of Glasgow, Scotland, in later years, he amended this fiction; actually he was born near Preston in Lancashire, England. Even though most of the less personal information in his book has turned out to be more or less correct, Trader Horn is not well regarded as a source of accurate information because of the way he played with the truth of his background.

Smith attended St. Edwards's College, Liverpool, where he learned Spanish, Portuguese, and French, but at the age of seventeen or eighteen he departed for the west coast of Africa in the employ of the trading firm of Hatton and Cooksons. He arrived on the west coast of what is now Gabon about 1871 or 1872 and spent most of the rest of his life trading up and down the Ogowé River. His later years were passed as an itinerant peddler of pots and pans in South Africa. It was in this capacity that he met the South African novelist Ethelreda Lewis. After only a few minutes of conversation, she discovered, to her delight, the remarkable reminiscences of Smith as a boy trader in the 1870s. The result was a book of adventures as told and written by Smith, but edited with added commentary by Lewis at the end of each chapter.

Although the book is worth reading in its entirety, only chapter 23 is of cryptozoological interest. (Cryptozoology encompasses the



3. *Mythical animal from a cave (Kuppenhöle) in Tanganyika.*

investigation, analysis, publication, and discussion of all matters related to animals of unexpected form or size, or unexpected occurrence in time or space.) The content is somewhat rambling, much as if one were tuning into Smith's thoughts and memories as they passed through his consciousness. Following are some of the passages pertinent to the Mokele-mbembe:

Aye, and behind the Cameroons there's things living we know nothing about. I could 'a' made books about many things. The Jago-Nini they say is still in the swamps and rivers. Giant diver it means. Comes out of the water and devours people. Old men'll tell you what their grandfathers saw, but they still believe it's there. Same as the Amali I've always taken it to be. I've seen the amali's footprints. About the size of a good frying pan in circumference and three claws instead o' five. There are some very big lakes behind the Cameroons. Used to be full of nice seal at one time. Manga they call it [Smith has his zoology mixed up: The manga were sea cows, *Trichechus senegalensis*, not seals]. But the Jago-Nini's wiped 'em

almost out, the old natives say. Pygmy elephants there too, and crocodiles that never kill humans. The natives up there talk of some Big Water. And what I say is they must have come from the Nile. What but some great creature like the Amali could account for the broken ivories we used to come across in the so-called elephant cemeteries? Fine old green ivory that's valuable for inlaying wood. Snapped right across in the thickest part and left in splinters. Aye! There's places in Africa where you get visions of primeval force. And not so distant either, as when you picture the prehistories of Europe and America. I was prospecting one time in Florida at the river mouths for mastodon bones. Nothing handier for phosphates. But 'tis a thing of the dead past there. In Africa the Past has hardly stopped breathing. You get fancies there if you're any sort of a man that's not homo stultus... What with the talk of the natives and the sounds you hear at night. And every swamp and mountain cave calling you to come a bit further. There are times when only a river seems safe. No menace in a river. Never still and never silent. Human as a man, and that's why we trust 'em. Aye, the savage'll sing on a river when he'd be trembling on land with the fear of something touching him. Nature's idea for a street—rivers.

Then follows the section about the cave art previously quoted. To what extent the foregoing contains fact is a matter of conjecture. If we accept, for the sake of discussion, the description of the footprints as accurate, we have an important link with Abbé Proyard's earlier report, though there is a one-hundred-year hiatus between the two observations.

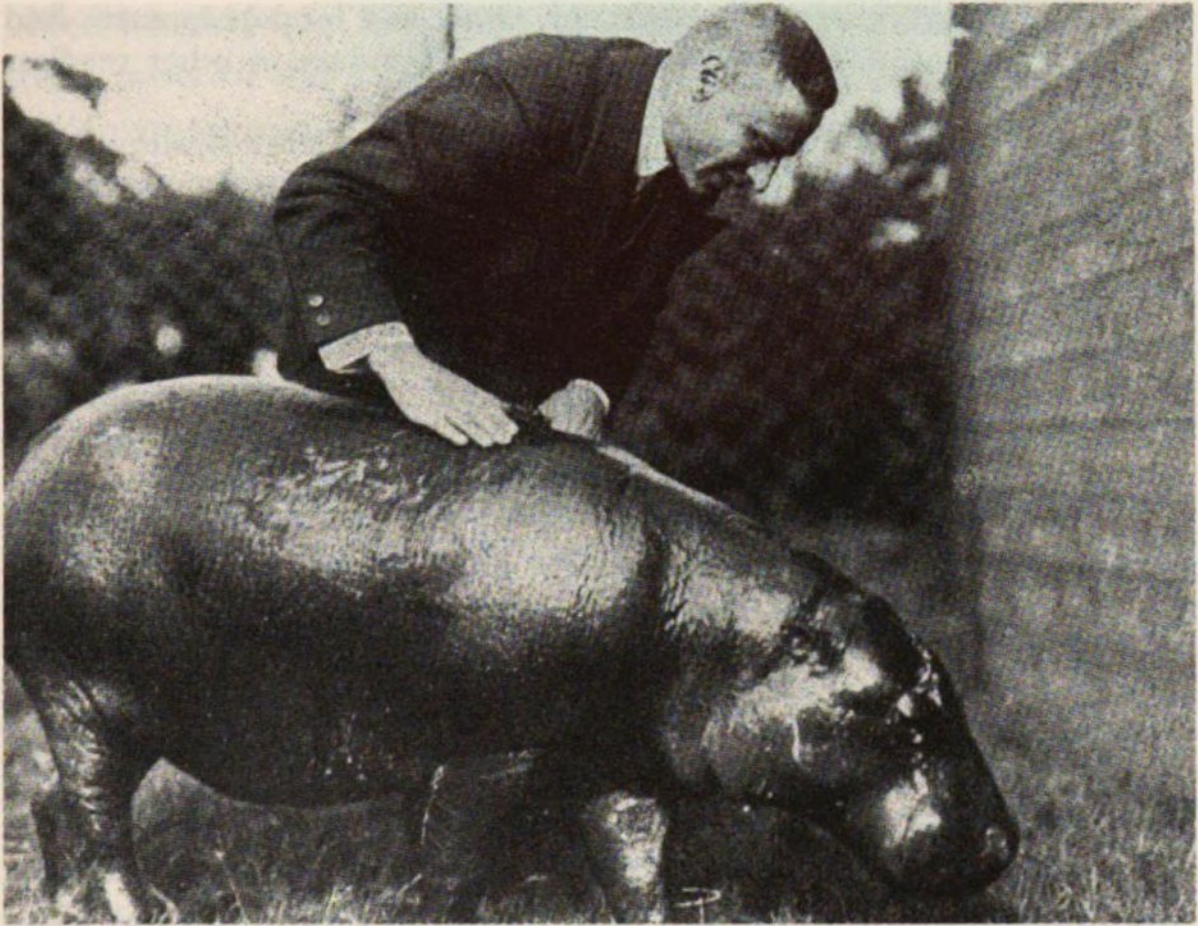
In 1912 Carl Hagenbeck (1844-1913), possibly the greatest animal collector of all time, was convinced that a dinosaur-like animal existed in Africa. Hagenbeck was not only an animal collector but a naturalist and animal lover as well. He pioneered the humane treatment of animals, both in word and deed, beginning the barless zoo approach in his zoological park in Stellingen, Germany. It is from Hagenbeck that we have further information about an unknown brontosaurus-like beast alleged to inhabit the interior swamps of Rhodesia. The following relevant paragraphs are from his book, *Beasts and Men*:

Some years ago I received reports from two quite distinct sources of the existence of an immense and wholly unknown animal, said to inhabit the interior of Rhodesia. Almost identical stories reached me, firstly, through one of my own travellers, and, secondly, through an

English gentleman, who had been shooting big-game in Central Africa. The reports were thus quite independent of each other, and, as a matter of fact, the Englishman and my traveller had made their way into Rhodesia from opposite directions, the one from the northeast and the other from the southwest. The natives, it seemed, had told both my informants that in the depths of the great swamps there dwelt a huge monster, half elephant, half dragon. This, however, is not the only evidence for the existence of the animal. It is now several decades ago since Menges, who is of course perfectly reliable, heard a precisely similar story from the negroes; and, still more remarkable, on the walls of certain caverns in Central Africa there are to be found actual drawings of this strange creature. From what I have heard of the animal, it seems to me that it can only be some kind of dinosaur, seemingly akin to the brontosaurus. As the stories come from so many different sources, and all tend to substantiate each other, I am almost convinced that some such reptile must be still in existence. At great expense, therefore, I sent out an expedition to find the monster but unfortunately they were compelled to return home without having proved anything, either one way or the other. In the part of Africa where the animal is said to exist, there are enormous swamps, hundreds of square miles in extent, and my travellers [Joseph Menges and Hans Schomburgk] were laid low with very severe attacks of fever [malaria]. Moreover, that region is infested by bloodthirsty savages who repeatedly attacked the expedition and hindered its advance. Notwithstanding this failure, I have not relinquished the hope of being able to present science with indisputable evidence of the existence of the monster. And perhaps if I succeed in this enterprise naturalists all the world over will be roused to hunt vigorously for other unknown animals; for if this prodigious dinosaur, which is supposed to have been extinct for hundreds of thousands of years, be still in existence, what other wonders may not be brought to light?

Hagenbeck's information is third hand, so we must inquire as to the nature and reliability of his sources (all three of whom Hagenbeck regarded as absolutely reliable in every respect).

Hagenbeck includes a short biographical note in his book about Joseph Menges. Menges had been up the White Nile with the British General Charles Gordon and knew the people, geography, flora and fauna of the Sudan and Nubia better than any other European. Menges joined Hagenbeck in 1876 and led many animal-search expeditions, collecting a variety of animals for Hagenbeck, including a new variety of wild ass. Menges



4. Hans Schomburgk with a pygmy hippopotamus.

apparently was not a writer and so we have nothing more concrete from him than what we get from Hagenbeck's summary. Several books about General Gordon confirm that Menges (sometimes spelled Mengies) joined Gordon as his personal servant in 1874. Menges was a naturalist, but probably joined Gordon (a colonel at the time) in the capacity of a servant in order to travel in Africa to study plants and animals.

Hans Schomburgk, the second informant, wrote several books, the most important for our purpose being *Wild und Wilde im Herzen Afrikas*, published in 1910. My reading of Schomburgk's work gives me the impression that he was a hard-nosed, open-minded skeptic when it came to reports of strange, unknown animals.

I have translated Schomburgk's reference to the strange animal reported in Lake Bangweulu in its entirety:

It is peculiar, that in Lake Bangweulu there appear to be almost no hippopotamuses. On the western side of the lake this could perhaps

be explained, in that the banks are sandy and hippopotamuses find the area unsuitable, although they are abundant in other reedless rivers.

However, along the eastern and southern sides large swamps cover the area, which are certainly an ideal habitat for the hippopotamus, yet one rarely, if ever, sees them there.

It is certain that they have not been hunted to extinction. The natives say that an animal dwells in the lake, smaller than a hippopotamus, but which feeds on them. It must be completely amphibious, because according to the statements of the natives, it never comes on land and its footprints are never seen. I am sorry to say I regarded this story as a fairy tale and obtained very little exact information. Later I discussed the matter with Carl Hagenbeck and am now convinced that it must be some kind of saurian. Particularly since Hagenbeck received reports from independent sources which are in agreement with my information and with the reports of natives in the region.

Independent information corroborating Schomburgk will be presented in chapter 15.

The year 1913 marked Hagenbeck's death and the beginning of a two-year German expedition into Cameroons and central West Africa led by Captain Freiherr von Stein zu Lausnitz. Until the end of World War I, when Germany eventually lost all of its African colonies, German exploration in Africa was extensive and thorough. One of its five colonies, Kamerun, included what is now the northern part of the Congo Republic. This area, between the Sanga and the Ubangi rivers (northern tributaries of the Congo), is extremely remote; much of the area is swampy flood plain, mosquito- and parasite-infested jungle, inhospitable and mostly unexplored. The German government commissioned Freiherr von Stein zu Lausnitz to explore, map, and collect botanical, zoological, and geographical data. The venture, known as the Likuala-Kongo Expedition, included reconnaissance of the western portion of the aforesaid region. The expedition got only as far as the Sanga River because of the outbreak of war in 1914, which resulted in the premature termination of the explorations. The official report of the findings was never published, apparently because Germany was preoccupied with war and post-war problems. Fortunately, the German-American writer Willy Ley, who

billed himself as a romantic naturalist, translated and published some parts of the report, and there is a section dealing with an unknown animal. My correspondence with Ley while he was still alive indicates that he read von Stein zu Lausnitz's manuscript with keen interest. According to Ley, von Stein zu Lausnitz worded his report with the utmost caution. The unknown animal was referred to as a "very mysterious thing" that "possibly does not exist except in the imagination of the natives," but which is "probably based on something more tangible." The evidence consisted of anecdotal native reports about a creature very much feared in certain parts of the Congo, specifically in the area of the lower Ubangi, the Sanga, and Ikelemba rivers. The point was made that these reports came, by and large, from experienced guides who, even though not known to each other, gave consistent details. The name applied to the animal was Mokele-mbembe. The following passage, translated from the von Stein zu Lausnitz manuscript by Ley, gives us the best description of the animal, but even more importantly, names actual places that can be located on maps.

The creature is reported not to live in the smaller rivers like the two Likualas, and in the rivers mentioned only a few individuals are said to exist. At the time of our expedition a specimen was reported from the non-navigable part of the Sanga River, somewhere between the two rivers Mbaio and Pikunda; unfortunately in a part of the river that could not be explored due to the brusque end of our expedition. We also heard about the alleged animal at the Ssômbo River. The narratives of the natives result in a general description that runs as follows:

The animal is said to be of a brownish-gray color with a smooth skin, its size approximately that of an elephant; at least that of a hippopotamus. It is said to have a long and very flexible neck and only one tooth but a very long one; *some say it is a horn*. A few spoke about a long muscular tail like that of an alligator. Canoes coming near it are said to be doomed; the animal is said to attack the vessels at once and to kill the crews but without eating the bodies. The creature is said to live in the caves that have been washed out by the river in the clay of its shores at sharp bends. It is said to climb the shore even at daytime in search of food; its diet is said to be entirely vegetable. This feature disagrees with a possible explanation as a myth. The preferred plant was shown to me, it is a kind of liana with large white

blossoms, with a milky sap and apple-like fruits. At the Ssômbô river I was shown a path said to have been made by this animal in order to get at its food. The path was fresh and there were plants of the described type near by. But since there were too many tracks of elephants, hippos, and other large mammals it was impossible to make out a particular spoor with any amount of certainty.

Such is the description of the Mokele-mbembe according to von Stein zu Lausnitz. Seventy-seven years later we still heard identical echoes of the reports given to him about the places named on the Sanga River, plus a great deal more. Details had not changed and corroborated not only the information presented so far, but also illuminated some obscure and contradictory points, as we shall see. A very sketchy confirmation of these reports comes from the German explorer-scientist, Dr. Leo von Boxberger. Boxberger had considerable African experience, as he had been a magistrate in Germany's African colonies prior to World War I. The only report of his experiences was published in the German periodical *Umschau* and entitled "Ein Unentdecktes Grosstier in Innerafrika?" ("A Large Unknown Animal in the African Interior?"). Heuvelmans quotes the relevant passage as follows:

My own contribution to the subject is unfortunately very small. At the mouth of Mbam in Sanaga in Central Cameroons and on the Ntem in Southern Cameroons, I collected a variety of data from the natives about the mysterious water-beast, but alas, all my notes and also the local description of the animal were lost in Spanish Guinea when the Pangwe attacked the caravan carrying my few belongings. All that I can report is the name mbokalemuembe given to the animal in Southern Cameroons...

The belief in a gigantic water-animal described as a reptile with a long thin neck, exists among the natives throughout the Southern Cameroons, wherever they form part of the Congo basin and also to the west of this area, doubtless wherever the great rivers are broad and deep and are flanked by virgin forest.

The loss of von Boxberger's notes was certainly a tragedy. However, the report above is extremely important, not only because it adds to our descriptive information, but also because of the anecdotal corroboration by a reliable witness. Specific places are given, so that I was able to make a judgement as to where an expedition

might most likely find traces of this problematical creature. The report, in spite of its brevity, influenced me greatly in my eventual decision to go in search of the alleged animal.

I was aware of much of the foregoing information because I had become interested in tracking down reports of unknown or unidentified animals in 1965. However, I hadn't been sufficiently impressed to take the matter seriously. During my ten-year tenure as one of the directors of the Loch Ness Phenomena Investigation Bureau, which included many summers spent in the field at Loch Ness, Scotland, I became much more receptive toward such data. The Loch Ness Phenomena Investigation Bureau was founded by David James, a member of the British Parliament. The objective of the Bureau was to investigate and, eventually to establish whether or not there were Loch Ness monsters. After I accepted the invitation to become a director in 1965, I vacillated in my attitude toward the whole matter of reports of unidentified animals and the question of the Loch Ness Monster, in particular.

This ambivalent, on-again, off-again mental state I was experiencing vanished forever in September 1970. On a clear, sunny day, late in the afternoon, Robert Love, Jeff Blonder and I were out in Urquhart Bay on Loch Ness. We were retrieving hydrophones that we had deployed at depths of 100 (300 feet) and 200 metres (600 feet), in hopes of recording animate underwater sounds, including any that might be attributable to strange, unidentified animals. Sitting, half-dozing in the bow of *Fussy Hen*, our work boat, I noted to my right, about 10 metres (30 feet) distant, an upwelling of water, often observed when large aquatic animals approach the surface from below. Instantly, I was fully awake, staring fascinated at what was happening. Without speaking, I pointed in the direction of the disturbance. Robert and Jeff stopped, as though frozen in time as they stared at the boiling water. My pulse raced, my heart pounded—then a black, roughly triangular object, its tip up about 30 centimetres (1 foot) swung out of the water and back down with a splash. About 0.5 metres (1½ feet) to the right, the convex back of some creature broke the surface, rolling and twisting, lifting the left flipper or fin out of the water as it rotated

toward the right. The appendage and the part of the body showing were black to dark brown, rubbery looking, hairless with an occasional wrinkle or roughness. My first thought: "If this is a salmon, it is mighty salmon indeed—the grandfather of all salmon!" The visible part of the creature that broke surface ranged in length from 1 to 2 metres (1 to 2 yards). After about a minute, it submerged as quickly as it had appeared.

Robert, Jeff, and I sat stunned, staring at each other, speechless. I recall how for days I refused to admit that I had seen, with my own eyes, one of the strange animals in Loch Ness, popularly known as the Loch Ness Monster. Yet this conclusion was inescapable, and, later, when the Academy of Applied Science obtained underwater photographs of these animals, including the appendages, I realized that indeed the triangular object we had observed was the left front flipper, exactly as photographed, and the three of us had not experienced a collective hallucination on that incredible September day in 1970. From then on, I knew the Loch Ness monsters existed. This state of mind has remained with me and most certainly has predisposed me to be receptive to reports of other unidentified animals, so that when James Powell first confronted me with reports of the n'yamala and Mokele-mbembe, I was ready to listen.

2

The Evidence accumulates

Amarillo, Texas, reminded me of a set for a Hollywood western. Arriving there for a lecture at the college, I had little reason to suspect this visit would lead to a dangerous search for a strange animal in the unexplored jungle of central West Africa. I had been invited to Amarillo College to talk about my research at Loch Ness—not so much about the ecology and biology of the lake, but about the “Monster.” After my evening presentation to a packed auditorium, a chap came up to me after the question-answer period and introduced himself as James H. Powell, Jr. He told me that he had been studying crocodiles in Gabon, a former French West African colony. While there, he had heard stories from the Fang people of a strange animal called *n'yamala* living in the swamps.

I looked quizzically at Powell, thinking “Who is this character and what is he selling?” As our conversation progressed, I gradually realised that he was not trying to sell the Brooklyn Bridge, but rather was a reasonable, serious individual. As if to underscore his sincerity, James Powell told me that he had come all the way from his home in Plainview, Texas, to hear my lecture. With a pleasant and outgoing manner, Powell further introduced himself. A graduate of Columbia University, and with a master's degree from Texas Technological University in Lubbock, Texas, he had studied herpetology at the University of Colorado and was now doing fieldwork on the status and distribution of Morelet's crocodile (*Crocodylus moreleti*) in Yucatan and in Belize. He had fallen in love with crocodile fieldwork and his studies also extended to America, Africa, and the South Pacific Islands.

I was impressed, not so much by Powell's credentials, as by his serious approach to my presentation about the “Loch Ness

Monster” research. More often than not, the reaction to my lectures was closer to “Is there a monster or isn’t there a Loch Ness Monster? Ha! Ha!” Nevertheless, I also concluded that his extensive fieldwork as a member of the Crocodile Specialist Group of the International Union for Conservation of Nature and Natural Resources and his great interest in unidentified animals, especially reptiles, qualified him as someone worth listening to. Powell related how in 1976, while studying crocodiles in Gabon along the Ogowé and N’Gounie rivers, he heard descriptions of the n’yamala, a beast similar to Trader Horn’s *amali*. Most of Powell’s informants were Fang—former cannibals and members of the Bantu people, some of whom have been migrating toward the west coast of Africa for perhaps the last 200 years or so. As Powell talked about the n’yamala, a subliminal recollection of this subject began to surface from the depths of my memory. During some of my historical research in various archives, I had encountered references to creatures something like what Powell was describing. I flew back to Chicago, but like a haunting line from a song or poem, the n’yamala kept intruding into my thoughts—so much so that I started a literature check on the subject, aided and abetted by some written material sent to me by Powell. As my interest deepened, whetted by material I was able to locate, I called Powell in Texas, inviting him to visit me in Chicago to discuss the n’yamala business in greater depth.

In due course Powell appeared in Chicago, specifically to see if I would be interested in going to Africa to investigate the matter of the n’yamala further. After several days of discussion we decided that an African expedition was a good idea. At that time I was still not totally convinced that the n’yamala was a viable project, but I did feel Africa was certainly one of the best places to look for strange animals. There were many reports of a variety of strange animals allegedly existing in Africa. I wondered whether we should shelve the idea of going to Gabon after n’yamala or search for a “flying snake” in South Africa, where Dr. Marjorie Courtenay-Latimer of coelacanth fame had been checking out reports of such an airborne creature. Both projects seemed equally interesting at

the time. As I knew Dr. Courtenay-Latimer I telephoned her in South Africa. In her opinion, the flying snake trail was "cold." Upon reflection I concluded that more fieldwork in Gabon was in order, to which Powell readily agreed. My original skepticism about the n'yamala was gradually disintegrating, perhaps influenced by my conversation with Dr. Courtenay-Latimer, who thought the existence of a creature such as the n'yamala was a possibility.

It was agreed that, before both of us leaped into a full-blown African expedition, Powell would carry out as much further preliminary investigation as time and financial support permitted. On January 31, 1979, he arrived in Gabon, hoping to discover as much as possible about the geographical distribution of the n'yamala and what relation, if any, this creature had to the Mokele-mbembe, reported from the Congo Republic to the northwest. During a two-week period, James Powell gathered a large amount of information, assisted greatly by the good offices of the personnel at the Albert Schweitzer Hospital at Lambarené, Gabon, and some of his findings were most exciting. James made a tape of his information, to which I listened with enthusiastic interest:

Albert Schweitzer believed in the sacredness of life, not just human life. Therefore, when the staff of the Albert Schweitzer Hospital at Lambarené (Gabon) learned of the conservation nature of my work, they allowed me to use the hospital as a base. While there, I became friends with a Swiss dentist, who had married a Fang girl from a village a short distance up the Ogowé from the hospital. Accompanied by him, I visited his wife's village, and there became acquainted with the village witch doctor. My dentist friend told me this witch doctor—a man of around seventy—was extremely intelligent, and so I found him to be. Using the dentist as an interpreter, I questioned him.

First, I showed him pictures of African animals found in the Gabonese jungles—leopard, gorilla, elephant, hippo, crocodile, etc.—and asked him to identify each one, which he did unerringly. I then showed him a picture of a bear, which does not occur in Gabon. This he could not identify. "This animal not live around here," he said. I then showed him a picture of a *Diplodocus* (a brontosaurus-like dinosaur) from a children's book of dinosaurs and



5. James Powell, collecting a snake specimen.

asked him if he could recognize it. "N'yamala," he answered, quite matter-of-factly.

I think n'yamala is the closest phonetic rendition I can give of the Bantu sounds. I asked my informant to repeat several times, slowly, and then I repeated it back to him, so that he could check my pronunciation. Compare with the *amali* of Trader Horn. I next asked my informant for more details on the n'yamala. He said it was a rare animal that was found only in remote lakes deep in the jungle. Only the very greatest hunters have seen the n'yamala. He himself had never seen one.

He then spontaneously added a detail that I found very interesting: He said that the n'yamala lived on "jungle chocolate." My Swiss interpreter explained that "jungle chocolate" was the local term for a plant that grows near the banks of rivers and lakes and bears large, nut-like fruits said to be favored by this mysterious animal. One thinks immediately of Freiherr von Stein zu Lausnitz's description of the Mokele-mbembe: 'It is said to climb the shore even at daytime in search of food; its diet is said to be entirely vegetable... The preferred plant was shown to me; it is a kind of liana with large, white blossoms, with a milky sap and apple-like fruit.'

Powell was quoting from the unpublished manuscript of the report by Captain Freiherr von Stein zu Lausnitz, described in chapter 1. He went on:

I inquired whether the n'yamala had a horn. The witch doctor said no. This, of course, was not what I wanted to hear, so I pressed him more closely, asking if he was absolutely sure it didn't have some sort of a horn, or at least something on its head that might look like a horn. But he refused to change his story, and insisted that no, it didn't have any horn of any sort. While this marks a discrepancy from other accounts, it at least proves that my informant was not saying things just to please me, for I am sure he could tell that I wanted him to say the creature had a horn.

There was no money involved in any of this. The four of us—the witch doctor, a patient for whom he was prescribing fetish at the time of our visit, the Swiss dentist, and myself—were simply sitting in the village juju hut conversing as friends. The witch doctor's patient gave essentially the same account as did the witch doctor, though, since we were all together, this could not be considered as independent evidence.

A picture of a plesiosaur was also identified as n'yamala. Pictures of other dinosaurs (*Tyrannosaurus*, *Stegosaurus*, and *Triceratops*) produced the same negative result as the picture of the bear. These animals did not live around there, and were unknown to my informants. A picture of a pterodactyl was identified as a bat.

The following day, I obtained a dugout and boatmen from the hospital and moved about 80 miles downstream to a small Omiené village in order to study *Crocodylus cataphractus* on the lower Ogowé. While based at this village I tried my picture test on a number of the Omiené. The results were consistently identical with those obtained at the Fang village. Pictures of a leopard, gorilla, hippo, elephant, and crocodile were all correctly identified. The bear was unknown. Pictures of a *Diplodocus* and a plesiosaur were both identified as n'yamala. *Tyrannosaurus*, *Stegosaurus*, and *Triceratops* were unknown. The pterodactyl was again called a bat.

I hope I am not corrupting the natives too badly with my pictures of prehistoric animals!

When questioned about the habits of the n'yamala, my Omiené informants said that it lived far off in remote jungle lakes. None of them claimed to have ever personally seen it. I failed to ask about the horn.

So much for my Gabonese data. You can make of them what you will. For me, these leads, though inconclusive, were tantalizing. However, as my grant from the Explorers Club was for studying crocodile populations, I did not have the chance to follow any of

them up. According to official statistics I got from the American Embassy in Libreville, 80 per cent of Gabon is still relatively unexplored. I found the lower Ogowé between Lambarené and Port Gentil incredibly wild and unspoiled—much to my pleasant surprise. Human population was very sparse, wildlife abundant. With its labyrinth of channels, papyrus swamps, and large lakes, this area would be an ideal last refuge for a relict population of large, aquatic reptiles. However, if the n'yamala is incompatible with hippos, then I wouldn't look for it in the main channel of the lower Ogowé, for hippos were so numerous in places as to constitute a hazard to canoe navigation.

During his second visit, Powell found Michel Obiang, the witch doctor of the Fang people and his earlier prime source of information, alive and well in the village of Obongo. During his first contact, Powell had come away with the distinct impression that Obiang had never himself actually observed a n'yamala, but that only the greatest hunters had seen it. Obiang now stated that he had seen a n'yamala when he was twenty-six years old, which would have been around 1946, since he gave his age as fifty-nine. He described a spot about halfway up the N'Gounie River, at the point where the Ikoy branches from the N'Gounie. There was a small cove off the main river where the water was deeper, and a small lake was located adjacent to the river. Obiang related how he had camped many days in the vicinity, building a hut for his greater comfort. He added that he saw a n'yamala come ashore during the early morning hours, and that, normally, the n'yamala remained in the water during the day but left the water at night, between midnight and about 5:00 a.m., to feed on jungle chocolate.

Of course Powell inquired immediately whether it might be possible to visit this area. Obiang agreed to obtain a canoeist to take him to the exact location, but suggested it would be highly unlikely that one would be fortunate enough to observe a n'yamala in a single day, because patience and many days of surveillance were required. With the aid of Daniel, the canoeist, and Alec, a carpenter from the Albert Schweitzer Hospital, the exact spot was reached in short order. Powell found everything exactly as described, a magnificent dense African rain forest with a small lake

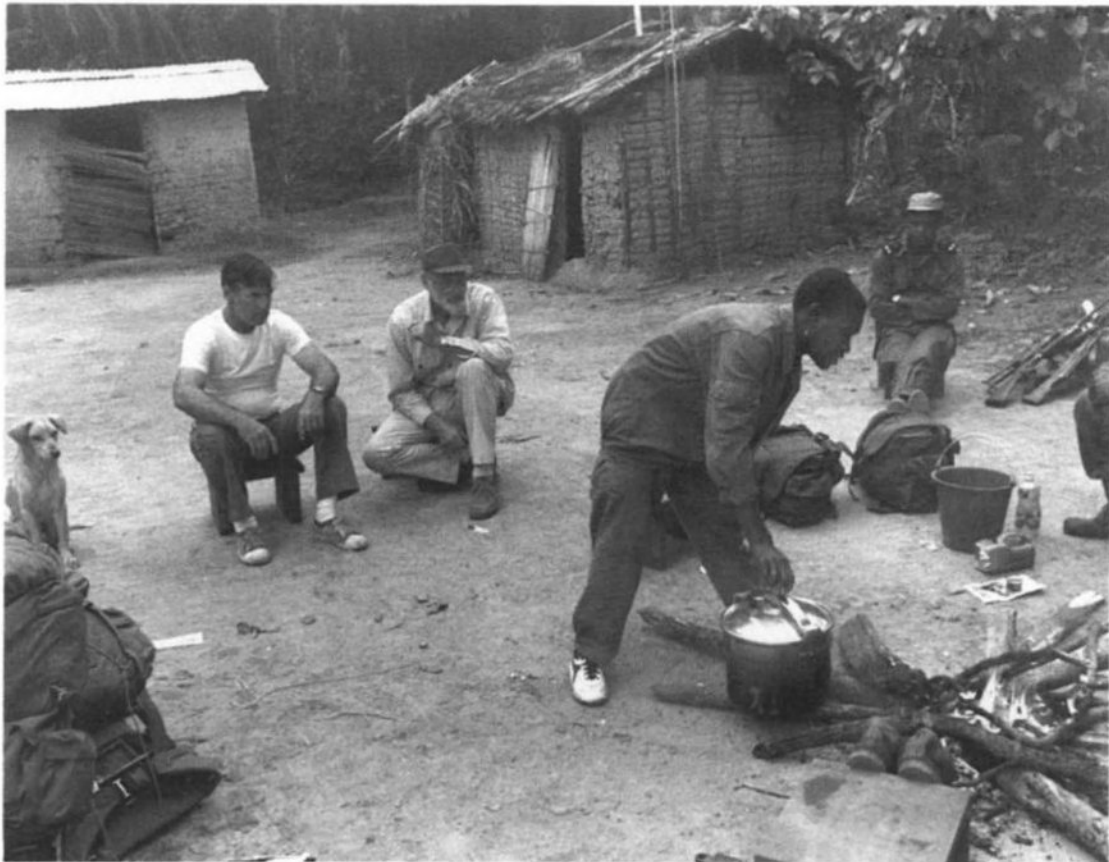
or pool perhaps 30 metres (100 feet) across near the main course of the N'Gounie. The place was thick with flies and black ants, which made an extended stay a most unpleasant prospect.

Powell decided to make a depth sounding at the point where Obiang had observed the *n'yamala*. With the aid of a beer bottle and some line, the depth was established at 5.5 metres (18 feet). The sounding could not, however, be made until Obiang and Daniel had been put ashore, as they appeared to be extremely frightened that the sounding might rouse a *n'yamala*. Powell suggested that, since Obiang appeared genuinely frightened, the man did most certainly believe there were *n'yamalas* in the area. However, no *n'yamala* was seen during the short period of observation. The description provided on this occasion was that of a creature with a long neck and tail about 10 metres (33 feet) from tip of snout to tip of tail, as strong as one of the caterpillar tractors being used in construction at the hospital at Lambarené, and weighing at least as much as an elephant. Two curious features attributed to the *n'yamala* were "fillets," or thread-like filaments, at the back of the head and neck, and a pair of pouches in the vicinity of the shoulders or front legs. These pouches, it was alleged, served as storage places for the creature's food—"jungle chocolate," nuts, or fruits.

Powell was anxious to obtain independent corroboration of *n'yamala*, as well as hard evidence, such as a bone or a piece of skin. On the way up the N'Gounie, he had noticed a bleached antelope skull in an abandoned village, formerly occupied by the Onkounie, a branch of the Garoua people. He questioned Obiang as to whether a *n'yamala* skull might perhaps be preserved as a fetish, which is a common practice among the peoples in the area. Obiang replied, "Oh no, no, the *n'yamala* is the king of the waters. It never dies. No one ever kills a *n'yamala*!"

Powell and his group now proceeded farther up the N'Gounie to about 30 kilometres (20 miles), midway between the point at which Obiang had sighted his *n'yamala* and the place where the Ikoy joins the N'Gounie. Here the village of "Marsoki" of the Akele people is located (the spelling of this name is of no significance,

because it appears on no map, but is as close a rendition of the sound as possible). The people were familiar with the term *n'yamala*, but their knowledge of it seemed much more vague. Opinions ranged from invisible animal, not flesh and blood, more like a genie, to the belief that a *n'yamala* lived in a pool near the Protestant mission at Ndende near the Gabon-Congo border. None of the natives identified any of the pictures of dinosaurs, including the *Diplodocus*, as a *n'yamala*, and none claimed ever to have seen one. Because the trail seemed to fade upstream, Powell again turned downstream to a point midway between the confluence of the N'Gounie and the Ogowé. There the Fang village of Abord produced more positive results. Three individuals, each independently, picked out the *Diplodocus* as being the *n'yamala* and gave descriptions similar to that provided by Michel Obiang.



6. Our supper, in the form of a singed and gutted monkey, is safely desposited in our pressure cooker.

Obiang suggested that if Powell wanted to see a n'yamala it might be better to travel down the Ogowé toward the coast to a wide part of the river where, on an island, a hippopotamus had been killed by a n'yamala. The native consensus is that the n'yamala is incompatible with the hippo, in contrast to the generally benign interaction of hippos and crocodiles. However, lack of sufficient time and money prevented Powell from pursuing this trail during his preliminary investigation.

If the n'yamala exists, the identification of its food is of prime importance because the association of an animal with its major source of sustenance is always very close. Powell contacted Paul W. Richards, the authority on African rain forest, describing the so-called jungle chocolate or wild mango as described by natives and by Ivan Sanderson (see chapter 15). Richards tentatively identified the plant as one of the Apocyanacea, possibly a species of *Landolphia*. I might add that Heuvelmans had come to the same conclusion independently. All of this led us to conclude that the n'yamala and the Mokele-mbembe were the same animal, most probably located in the Congo Republic jungle swamps rather than in Gabon. The probable migration route of the Fang intersected the Mokele-mbembe tradition, which suggested to me that the Fang were reporting legend or fact from the past rather than actual current events. The true range of the animal might be located somewhere between the Sanga and Ubangi rivers. Traffic on the Sanga and Ubangi has increased over the years. So it is reasonable to suppose that a river animal, such as the Mokele-mbembe was alleged to be, would have retreated to smaller streams devoid of activity, perhaps between the Sanga and Ubangi and any surrounding lakes.

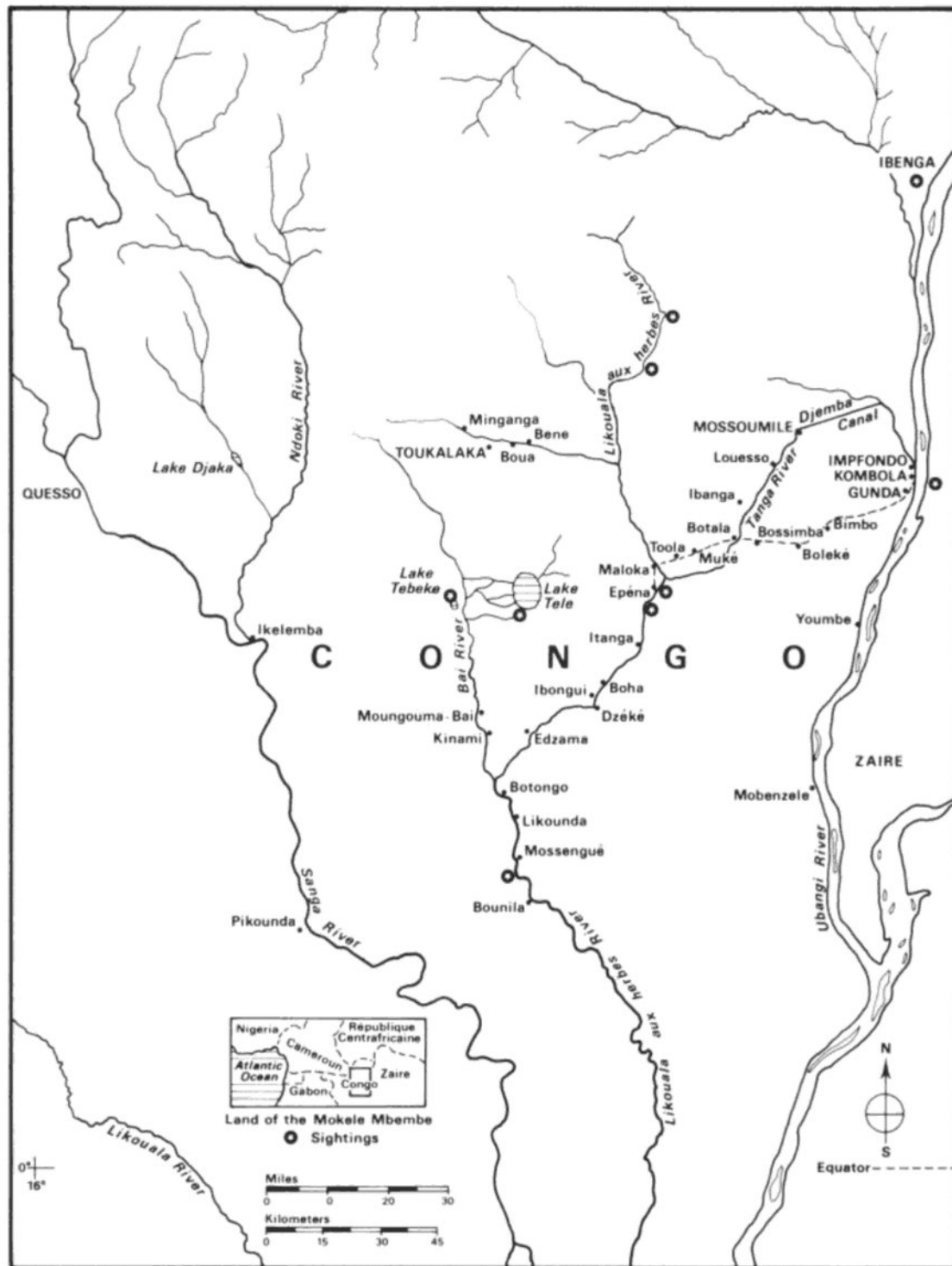
3

Mounting an Expedition

By now I knew James Powell rather well, which was important considering that the two of us were contemplating a dangerous venture into an unknown part of the world. When James visited me at my house, I could not help but notice how meticulously clean he kept himself. It seemed he was forever washing his hands. I remember wondering, “How does he do that in the jungle?” Would he be a good comrade in an unexplored, dangerous part of the world?

Late in 1979, James and I met again in Chicago. Seated on my living room floor, we carefully studied a United States Defense Mapping Agency map of the République Populaire du Congo. The area of interest was mostly blank white, rather than the familiar green, brown, and blue found on most topographical maps. This great territory still remained largely unexplored, so there were insufficient data to delineate the terrain. James pointed to an almost circular lake in the middle of nowhere. “I have a feeling about that lake, Roy. I think that is where we might find the Mokele-mbembe.”

“Well,” I replied, “if we assume the animal’s range is shrinking symmetrically, that just about marks the center of its previously reported range—the Sanga River and the Ubangi on the east. What bothers me is that the natives told von Stein zu Lausnitz that the Mokele-mbembe is not found in the Likouala-aux-Herbes River, which pretty much cuts through the middle of the region we are looking at. Still, I suppose that’s as good a guess as any. Let’s see how close we can get to the lake by air.” Upon examination, we found that the town of Impfondo, located on the Ubangi about 725 kilometres (450 miles) north of Brazzaville, was supposed to have an airstrip. The next day I checked with our University travel



7. Map indicating *Mokele-mbembe* sightings.

agent regarding air connection to Brazzaville and, hopefully, to Impfondo. The word "Impfondo" was hardly out of my mouth when a young woman stepped forward from the waiting line of customers. She said, "I'm Rita Hendrick and I've just come from Impfondo!" I could not believe what I was hearing. It turned out that Rita had been doing research on health care in the post-colonial period of certain African countries, particularly the Congo Republic, on a Fulbright Scholarship. She told me and the travel agent that Lina Congo, the Congolese airline, flew scheduled flights to Impfondo. Furthermore, Rita told us that there was an American missionary at Impfondo, Pastor Eugene Thomas, whom we ought to contact. As it turned out our expedition could not have succeeded except for this chance piece of information. I immediately booked two round-trip airfares, Chicago-Impfondo, Congo Republic.

I realised later that I had been rash, indeed, because we had no assurance of getting visas into the country. My colleagues, with whom I discussed the matter of obtaining visas, were exceedingly pessimistic. Because I tend to rush in where angels fear to tread, I called the Permanent Congolese Commission at the United Nations and explained what I had in mind. By return mail I received application blanks, which James and I completed immediately. Back they went with our passports, and five days later we had our visas for Congo, Brazzaville. Just as easy as that. Because we were sure of getting into the country, preparations now began in earnest. James and I made a list of equipment, to which I added the necessary medical supplies. Inoculations galore were mandatory; and when we had finally completed our medical preparation, we imagined ourselves immune to all the ills of humanity. This was hardly the case, but we were secure against all anticipated disease problems in the Congo, except for snakebites. I wrote a letter introducing James and myself to Pastor Thomas and also to the American ambassador in Brazzaville. As preparations progressed, Rita Hendrick proved an invaluable friend who was able to provide names and addresses of other important contacts in the Congo Republic.

While all of this was going on, Yorkshire Television, a production company in England, somehow got wind of our expedition. A few phone calls and a few weeks later, they had dispatched a camera crew to Chicago, ready to turn James and me into movie actors. Actually, Yorkshire Television was involved in the production of Arthur C. Clarke's television series, "Mysterious World," and in that connection they wanted to include our strange quest. In return for our cooperation and our promise to give them first use of our film footage, they supplied us with 8-millimetre-movie film equipment.

For two days, James and I played the roles of departing explorers over and over again, in downtown Chicago, in forest preserves,



8. James Powell and the author in Chicago surveying the almost blank map of the Likouala swamp region.

and in my house, where the great project was first hatched, until either the director felt he was satisfied or until everyone was too exhausted to continue.

James and I concluded that the life of a movie actor was not for either of us. Some of the filmed scenes seemed totally ludicrous, particularly when we were asked to suspend ourselves in netted jungle hammocks between two trees in a Chicago forest preserve on a cold January day. We smiled grimly through our chattering teeth and carried on as requested. Neither James nor I ever understood exactly how such a sequence could be used in a documentary about our African adventure. Perhaps if we had been receiving more than the nominal \$ 100 per diem, acting would have seemed more attractive.

On the 30th of January, 1980, we were ready to go, more or less. My stepdaughter Dana drove us out to O'Hare airport in my jeep, which was adequate both for us and for our gear. We had decided to travel very light. After checking our baggage through to Brazzaville, James and I relaxed over drinks in the airport's Seven Continents Restaurant. After the nerve-racking, exhausting expedition preparation, exacerbated no end by Yorkshire Television's demands, this was the first time we could really relax.

My thoughts were mixed. Was there an unknown animal waiting at the end of this zoological rainbow? Was I off on a zoological wild-goose chase? I said to myself, "Most probably, but so what? This could be fun—dangerous to be sure—but one doesn't live forever." I shared some of my musings with James, but, for the most part, we each remained lost in our own thoughts. The impending excursion into the unknown was sobering, as well as awe inspiring.

We almost didn't get to Africa because of foul-ups, some our fault and some attributable to the airlines. First, our connection to Boston, where we would take a TWA flight to Paris, was half an hour late in departing. We would never have made the flight at all had not TWA held the plane for us and for our baggage transfer. All we could do was hope our baggage had made it, too, and that it would be at Brazzaville when we arrived.

In Paris we had an eight-hour, ulcer-producing layover. Rather than develop ulcers, James suggested we go into Paris where we talked to Bernard Heuvelmans via phone and picked up some books from Plon, his publisher. Heuvelmans undoubtedly knew more about unidentified animals in Africa than anyone. Neither of us had ever met him before, but both of us had corresponded over the years. He was excited about our expedition, this telephone call being the first he had heard of the venture. He also had various bits of advice, all of which we took seriously. The most disturbing was that he believed the difficulties associated with an expedition into the unexplored swamp would be very great, perhaps insurmountable. He assumed we planned to carry sufficient food and water for our entire sojourn, which we assured him was not our plan: we intended to live off the land.

He estimated, correctly, that an African would consume about 2 kilograms (5 pounds) of manioc or cassava (the starch staple in the African diet) per day. Obviously, if an African had to carry 70 kilograms (150 pounds), in addition to a baggage load of 15 to 18 kilograms (33-40 pounds), the whole idea was impossible. He wished us safe passage and hoped we would come up with something cryptozoologically interesting. Once airborne, on the final leg of our journey, I relaxed. The only thing that could now prevent us from reaching Brazzaville would be a crash. Fortunately, there was neither a crash nor was there a further mishap.

At Brazzaville Africa lived up to my expectations. The heat was cloying, and the sights and sounds were reminiscent of what I had read of the days of Stanley and Livingstone. The rolling hills and bluffs in the distance and the mighty Congo River filled with floating mats of water hyacinth were lovely indeed. Palms, mimosa, and acacia loaded with pink-red blooms completed the scene. Our passage through customs was easy, although my 12X binoculars attracted some interest, as did our large supply of photographic film.

Rita Hendrick had recommended a cheap but nice hotel. Unfortunately, it was full up, so off we went to the Russian-built Cosmos. This tomblike structure, formed out of cast concrete, was

not exactly palatial, but it would have to do since our finances were extremely limited. As we settled into our hotel quarters, I had the distinct impression that the Russians had built the place to withstand the Siberian winter, having forgotten they were in Congo Brazzaville on the equator. Relaxing with large bottles of cold beer on the veranda, overlooking the Congo river, with Kinshasa, the capital of Zaire, visible in the distance on the opposite shore, James and I laid our plans for the next few days.

The following morning we headed straight for the American embassy to register and to pay our respects. The walk to the embassy was an adventure in itself, with a myriad of new sights, sounds, and smells assailing our senses. I was struck by the extreme contrasts of new and old—the modern mixed with more primitive aspects of African life. At the embassy we met with John Archibald, U.S. cultural attaché, who turned out to be very interested in what we were up to. We told him how the best efforts of our travel agent in Chicago had failed to secure bookings for us on Lina Congo, via normal commercial channels. Archibald advised us to get to the bank, change money, and purchase tickets for Impfondo, as there was definitely a Lina Congo flight the next day, which we had better make. He explained that, regardless of what schedules might say, Lina Congo flew when it could, rather than when scheduled. This rather enigmatic remark left us wondering exactly what we could expect from the airline. At the bank, the exchange rate was slightly less than 200 Central African francs (CFAs) per dollar, so my \$ 2,000 translated into 395,000 CFAs.

Back at the embassy, after purchasing our round-trip tickets for Impfondo at 40,000 CFAs each, we were introduced to American Ambassador William L. Swing. When we explained that our purpose was to discover evidence of the existence of the *Mokele-mbembe*, he assured us that Pastor Gene Thomas undoubtedly would have a lot of valuable information for us, as he had been at Impfondo for 28 years and had made many excursions into the bush. The ambassador emphasised that we would be entering a remote and dangerous area beyond the direct jurisdiction of even the Con-

golese government. He further warned us that there were reports of a dangerous pygmy tribe living somewhere between Impfondo and the town of Queso. We discovered later that this was not the case, at least not in the last ten years or so. He considered it his ambassadorial duty to warn us of the dangers and to explain that, if we proceeded as planned, we were essentially on our own and would have to take the responsibility for our own survival. "Fair enough," I responded. Next, the ambassador produced a letter from Pastor Thomas addressed to me, which, because of lack of time, had been sent to the embassy, anticipating our arrival. In his letter, Pastor Thomas assured us that he would be happy to help us in any way he could. He advised us to purchase and bring with us two or three extra snakebite antivenom kits. He outlined other equipment needs which, to my relief, we had pretty well anticipated. A shopping list of supplies for the mission was also included.



9. The author calculating the position of the expedition based on observation and aerial photographs.

By late afternoon, our purchases had been completed, and we were able to store our antivenom kits and perishable food for the mission in the embassy's refrigerator. Cynthia Hanson, the American Economic-Commercial officer, was very taken with the possibility of an unknown species surviving in the northern swamps. She invited us to a party hosted by the Marine detachment, where we met many colourful Congolese, not part of or directly related to the American embassy or the diplomatic community. All, without exception, were interested in our strange quest, but none could tell us anything about the Mokele-mbembe. The German ambassador, Harold Nestroy, was also keen on the project. He was sure that if we found any evidence at all, a future joint Congolese-American expedition could be organised.

At 5:45 the next morning James and I collected our snakebite kits and food stored at the embassy and headed for our plane. Considering the late hour of our departure from the Marines' party the night before, and the way we had freely partaken of the alcoholic refreshments provided, this was no small feat. Lina Congo found our equipment to be well beyond individual weight allowances, so extra charges had to be paid. Although we were on the threshold of the unknown, the practical details of getting ourselves and our equipment to Impfondo prevented our thoughts from dwelling very much on the anticipated adventure. To our surprise, the small, twin-engined plane was air-conditioned. After the cloyingly oppressive heat, we felt cold.

Arriving at Impfondo, we found its airport to be little more than a small ribbon of blacktop, a few fenced-off gasoline storage tanks, and a corrugated, iron-roofed shelter for waiting passengers. We were met by a Congolese security officer who, to James's dismay, promptly relieved us of our passports. James's reluctance to relinquish his passport had all the makings of a major confrontation when, fortunately, Pastor Thomas arrived with the mission truck. He reassured James that this was standard procedure and would not cause any problems while we were there.

Pastor Thomas was in his mid-fifties and appeared to be in excellent physical shape, despite his exposure to the indigenous

diseases during his more than twenty years in the Congo. Fit and athletic, he did not at all resemble the stereotype of a man of the cloth. Yet his dark eyes seemed to search the depths of my soul in order to determine if I was right with God. He wore a T-shirt and a visored cap that might have suited a baseball catcher or pitcher just as well and I kept half-expecting him to call for the next pitch at any moment. I was further impressed with his total command of Lingala, the language used by the native Congolese, and with the African French spoken everywhere, except in the bush. Hardly able to contain our impatience, we asked if he had ever heard of the Mokele-mbembe. To our cautious relief, he told us that, indeed, he had!

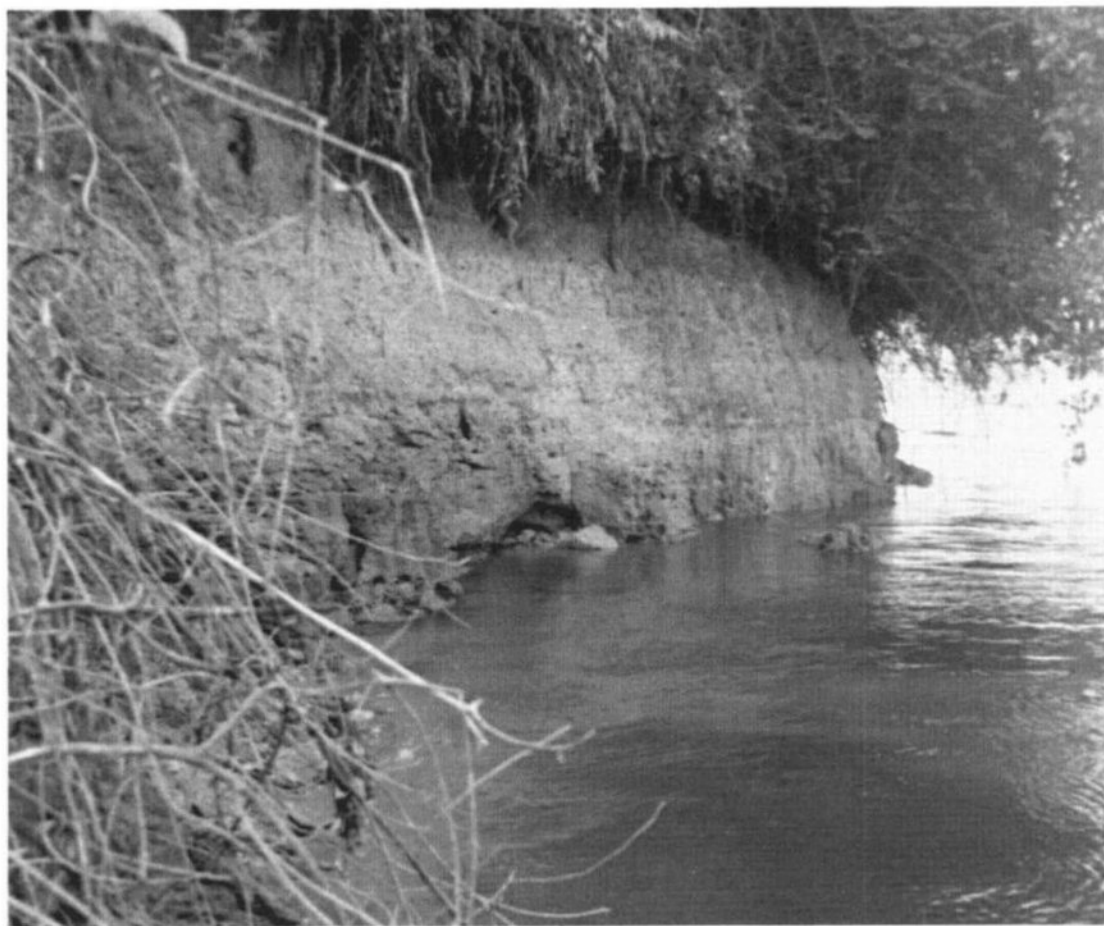
Reassured, James and I loaded our gear (which was sprawled on the blacktop next to the plane) onto the mission truck. Our arrival at Impfondo apparently was a major event. Americans were definitely unusual birds, rarely seen, and known only vaguely from rumour and Russian misinformation. Crowds of adults and children milled around. Most of the children carried short-handled hoes and some had machetes. Pastor Thomas explained that the children were allowed one day per week away from school. This was hardly a holiday, as they were expected to work in the People's Garden (which explained the hoes and machetes).

Arriving at the mission, we were welcomed by Pastor Thomas's wife, Sandy. She showed us to quarters furnished with real beds and fresh sheets, a pleasant surprise because we had expected to camp out after arriving at Impfondo. That first night at Impfondo underscored for me the melodrama of Africa. Retiring early after a good supper, we were at first not able to sleep. My log entry reads: "The heat and humidity are oppressive, hope we get used to it." Until the early morning hours, there was an incessant sound of drums beating. At first the drumming, singing and sounds of dancing were appealing, but, after several hours, the charm began to pall. We later learned, to our relief, that this was not to be a nightly occurrence. We had just happened to arrive during a pygmy celebration; and such celebrations usually lasted for one to three days in honor of a birth, death, or marriage.

Nights were never quiet, however, even when there were no celebrations. Fruit bats, feeding at the tops of palm trees, made a continuous nocturnal racket. A few metres from the mission, the jungle's edge permitted the creatures of the swamp-forest to approach closely. Often we heard a leopard's cry and a variety of other unidentified animal sounds. These voices of the jungle seemed to speak of life and death, the struggle for survival, pain and agony; and, no doubt, triumphs and pleasures also. Finally, at 4:00 a.m. I fell asleep. The temperature had dropped to 80° F, the perspiration stopped wetting my face, and the drums quieted down.

In the morning, after a hearty breakfast of bacon, eggs, and home-baked bread, Pastor Thomas took us to meet André Mouelle, the commissar politique. The local chief of security was also present. We explained our mission which immediately kindled the commissar's interest. As a boy, he had been told by his mother about the Mokele-mbembe, but he had never seen one. However, he had seen a giant bird with a 3 to 4 metre (10 to 13 foot) wingspread. He informed us that these great birds are rare now, to be found only in the more remote parts of the jungle where they nest high atop the tallest trees. Their favourite food is monkey. Mouelle graciously offered to call together some of the older men who probably would be able to provide detailed information about our mystery animal. We were delighted to find that the Mokele-mbembe was familiar to the Impfondo residents. There was Mr. Bazinga, who stated he knew at least three or four men who had seen a Mokele-mbembe and that he could arrange a meeting with them. Another villager, Mr. Mikole, told us there was a spot in the Ubangi River where a Mokele-mbembe had been reported. This spot was near the Zaire shore a few kilometres downstream from Impfondo.

We asked Mouelle about going to Epena and Lake Tele. He agreed that a trip to Epena and Tele was feasible and that a trek from Epena to Quesso might also be worth while. According to him, there were reports of 15-metre (50 foot) pythons and a strange, rhinoceros-like animal that killed, but did not eat,



10. *Mokele-mbembe* encounter site on the eastern shore of the Ubangi river, about 15 kilometres downstream from Impfondo.

elephants. In response to my disbelief in 15-metre pythons he agreed that the length could well be exaggerated, but he was adamant in maintaining that both the *Mokele-mbembe* and the elephant-killing mystery animal were real, not mythical creatures. With regard to known animals, we were told that there were large herds of as many as 50,000 buffalo to the south and large groups of lowland gorillas with as many as fifty in a group. Even if the numbers were exaggerated tenfold, this area was obviously a nature-lover's paradise. The gorillas interested us most of all because, according to published zoological data, they were not supposed to be present so far east. We were informed that during the rainy season (September through November), these hairy giants became more bold, raiding village gardens, scaring villagers in the process.

James and I decided that we would soak up as much information as possible at Impfondo prior to deciding our next move. A consensus was developing that we were at the very eastern edge of the Mokele-mbembe tradition and probably should move west into the Epena district to get to the heart of the matter. Still, we did not know whether we ought to move north or south or simply head west at our present latitude.

When not pursuing the Mokele-mbembe mystery our time was used to advantage by helping with chores around the mission, especially repairing broken equipment. Aside from these tasks, James and I felt strongly that we ought to undergo some jungle training to familiarise ourselves with the problems of travelling and living in the jungle swamp. Gene introduced us to Marien Ikolé, a pygmy who was originally from the village of Minganga, located in the north about 35 kilometres (22 miles) west of Toukalaka, not far from the Ndoki River. He was familiar with a large area, including Ikelemba village and the Ikelemba River, from which reports of the Mokele-mbembe originated. He told us that in the Ikelemba and Tebeke rivers were giant animals that made great waves in the water. He said many in the north had seen the animal, even though it came out mostly at night to feed. We showed Marien our animal picture books of presently living animals and reconstructions of extinct animals. Without hesitation, he identified the sauropod dinosaurs as Mokele-mbembe. James had been through this routine before in Gabon, but as Marien pointed at the sauropod dinosaurs in recognition, my heart skipped a beat. Gene arranged with Marien to be our guide and teacher in the ways of the jungle. We planned several training treks into the bush, hoping to finally graduate to traversing the jungle by ourselves.

These treks served a dual purpose, familiarising us with the jungle and providing an opportunity to get to know the pygmies, a wonderful people who seem to know everything about the jungle environment. The pygmies comprise, by and large, a handsome group, about 1.2 to 1.4 metres (4 to 4½ feet) in height—presenting somewhat diminutive versions of ourselves. They were friendly,

without exception. Around Impfondo, they wore an odd assortment of western clothes, reflecting their association with the mission and the Congolese at Impfondo. They were comfortable in shoes and sandals or barefoot, as we learned later. Exceedingly strong and tough for their size, their endurance and ability to withstand hardship are phenomenal. During our first treks into the jungle, our pygmy guides constantly had to stop and wait for us to catch up, because we could not match their pace. This seemed to amuse them. Contributing to our slower pace was the fact that we were not at all in a hurry. We savoured to the fullest extent the primitive beauty, the strangeness and mystery, of this primeval environment, and felt constantly reminded that here was a part of



11. Pigmy collecting coconuts for the evening meal. The coconut milk was a welcome change from the chlorinated swamp water we were forced to drink most of the time.

the earth where the values and skills of “civilisation” counted for very little.

As we moved through the jungle, I stopped periodically to observe and photograph exotic plants, as well as to procure specimens. Early on, my supply of plastic specimen bags would be filled, after which I could travel with greater speed. After many hours of a particularly sweaty, gruelling trek, the pygmies stopped, pointing to a vine with a stem about 8 centimetres (3 inches) in diameter. With a machete, they quickly cut metre-long sections, hoisting one cut end up over their upturned mouths. A clear, watery sap flowed from the end of the severed vine and they drank it with relish. When they provided the same refreshment for us it turned out to be a real treat. The sap was clear and cool, with hardly any taste, and was a perfect substitute for water. Each excursion into the jungle extended our knowledge and ability to survive.

Interspersed with these trips were meetings with the informants sent to us by our new friend, André Mouelle. Our first visitor was Joachim Mameka. His words made us curious, but were also a disappointment, because he was not an eyewitness. Still, we appreciated his honesty and forthrightness. He told us: “The commissar sent me to you, but I am not really the top man of the village. I am a young person. I suggest you talk to the older men who have seen the Mokele-mbembe. We, I and my brother, only know what we have learned from them.” He continued,

It is an animal of the water. My father knew this animal and always spoke the truth. He, unfortunately, died five years ago. He was the oldest man in the Likouala and so he knew a great deal. It has been seen in the Ubangi to the south where there is a big bend in the river and a vortex. Also there is another place where there are many rocks on this side of the Ubangi. I do not think anyone has seen it at these places just now, but, in the Epena district to the west, there are reports of this animal right now. You must speak with the pygmies—they travel in the jungle—they know—they have lots of courage and go to places Africans would never dare to go. They know the truth about the Mokele-mbembe. The name Mokele-mbembe is not given to a nonexistent animal—of that you can be sure. There is also another animal with a horn that is very savage

and kills but does not eat elephants and hippopotamuses. It will tear hippos or elephants with its great horn. Then there is a great bird, which is very rare now, but some have been shot. It eats monkeys and goats. It is called *Ngoima* or *Njoela* in the Mbonza language.

I said to James and Gene, who had been translating: "Interesting but hardly very concrete—all second- and third-hand stuff."

Unfortunately, although our informants were certain the creature was real, none had ever seen one and had only heard of it from others, especially their fathers and grandfathers. The pygmies we interviewed seemed to know the most—understandably, because they are the true people of the trackless jungles and swamps, places where other Africans never go. Inquiries north and south of Impfondo brought further recognition, but it soon became apparent that the legend grew more vague as our distance from the town increased.

On the morning of February 6, while I was tinkering with an outboard motor in the mission workshop, Pastor Thomas called me excitedly to say that an eyewitness was at the mission. He introduced James and me to Firman Mosomele. Firman said that about forty-five years ago, when he was about fourteen years old, he saw a Mokele-mbembe as he was coming around a bend on the Likouala-aux-Herbes just below the town of Epena. He described a reddish-brown, snakelike head and neck about 2 or 3 metres (6 to 8 feet) in length. He paddled his canoe away immediately, but not before he saw the creature's brownish back (about 2 metres, or 6 feet) break the surface momentarily.

Inadvertently, we had left our picture book of reconstructed fossil animals lying on the mission table. Without prompting, and to our astonishment, Firman picked out the illustration of a sauropod (an herbivorous dinosaur) in our animal book as being the Mokele-mbembe. Both James and I were electrified by this. Could we be on the right track at last?

Through our interpreter, I asked how he knew it wasn't just a large *nyoka*, or snake. "Ah," he said, "the neck was attached to a large body, a part of which I clearly observed."

"Could it have been an *ngubu* (hippopotamus)?"

“Emphatically not! I know ngubu with its large head and short neck. This animal had a small head on a very long neck, nothing like an ngubu!”

He added that in the Epena district, where the Mokele-mbembe lives, the people never go to the riverbank in the late afternoon because that is when the terrible beast feeds on vegetation at the water’s edge. Usually, only its head and neck are seen. He said that footprints have been observed on the riverbank at Mokengi, but that the rains always wash them away. Lastly, he spoke of the *Aseke-moko* (or *Emela-ntouka*), a water animal with a long horn, different from the Mokele-mbembe. He knew very little about this animal, stating emphatically that he had never seen one.

At the mention of a second unidentified animal, James and I exchanged doubtful glances. It seemed entirely too much of a good thing to be true.

4

Investigation on the Ubangi River

From all we had heard so far, the Mokele-mbembe appeared to be centred in the Epena district, about 95 kilometres (60 miles) to the west, beyond the *vaziere*, or great swamp. As the dangers and difficulties of the swamp were formidable, we hoped to cross it by plane. We had learned that a small craft belonging to the Lina Congo was on occasion flown by a Canadian pilot into a grassy clearing near Epena. If we were able to get such a flight, reaching the heart of the Mokele-mbembe territory would not be too difficult. If not, we would be faced with traversing the swamp on foot. Such an endeavour, Gene assured us, was not to be undertaken lightly. Nevertheless, James and I were in agreement that, regardless of the danger and difficulty, we would do it if necessary. In the meantime, it seemed prudent to contact other sources to confirm the *Mokele-mbembe* information we had been getting from the people around Impfondo. The best way to do this was to take a trip down the Ubangi. After all, we had a few days before a plane might become available to drop us at Epena, on the Likouala-aux-Herbes River.

Because Gene was devoting a great deal of time and effort to our investigation, we, in turn, assisted in any way possible with mission chores and projects. After helping to remedy some problems with the mission's electric power plant, we planned to devote the next day to a downstream excursion on the Ubangi, but a broken fuel line for the outboard motor stopped us cold. The visit to the alleged Mokele-mbembe observation site south of Impfondo on the Zaire side of the Ubangi had to be postponed. Instead Gene suggested we visit Kombola, a pygmy village on the way to Epena. There was a road of sorts to this village, so we opted for the mission truck. About halfway there, the road became less and less

recognisable as a road, many large mud puddles alternating with rut-scarred higher ground. With a smash, a bang, and a sickening thud, the truck suddenly went into the muck up to the front axle. Now what? Marien took off for help, running several kilometres before he encountered anyone. In due course, five pygmies appeared, eager to assist. By cutting poles for levers and using logs as fulcrums, we eventually worked the truck out of the muck. The rest of the way to Kombola would have to be on foot.

The pygmies at Kombola were very friendly, which seemed to complement the lovely red cannas blooming in front of their huts. James decided to try out his picturebook identification procedure here. To our chagrin, none of the pygmies identified anything except known animals. They knew little or nothing about the Mokele-mbembe. Not wishing to appear rude, we apologised for our short visit, pleading problems with the mission truck left behind. Back at the truck we piled in, thankful for the rest. The return to Impfondo was accomplished without incident, but the excursion had been somewhat disappointing.

The next day was spent looking after those vexing bureaucratic matters so often encountered in Africa. The chief of security told us that the documents allowing us to proceed to Epena would be ready on the morrow. I hoped this would be the case but knew from past experience that it was doubtful. In the morning a Lina Congo plane arrived from Brazzaville bringing the mission nurse, Sharon Brinker, back from leave. The scene at the plane was incredible, as large numbers of dead monkeys, small antelopes called *becka* (actually a species of duiker), and other miscellaneous game were loaded into the cargo-hold. As it was a warm day the smells were every bit as spectacular as the sights and sounds.

At that time I was certain I had reached the pinnacle of experiencing unpleasant odours. The events of the next day dispelled that idea. A tug chained to five barges arrived from Brazzaville and was loading to return downstream via the Ubangi and Congo rivers. Partly to assuage our guilty feelings because we were taking up so much of Gene's time, we offered to help load empty mission propane cylinders onto the barge to be recharged in Brazzaville. There



12. James Powell interrogating pygmies at the village of Kombala about animals and the *Mokele-mbembe*.

was a rather narrow plank laid across the side of the barge to shore. Everyone except James walked up and down this plank easily. Balancing an empty propane tank, he managed to get halfway up the plank. There he stopped, teetering back and forth to the delight of a crowd of African women and children. James looked down into the water, then at the barge, then back at the women. Drawing a deep breath, he marched resolutely up the plank onto the barge amid loud cheers and laughter from the watching women. We had been preceded by passengers and traders who had dumped loads of dead game, including fish, onto the hot steel decks of the barge. The stench of these carcasses on the burning hot steel plates is never to be forgotten. A few passengers were smoking meat over open fires on the decks, which added an additional interesting aroma. The acrid smell of burning hair carried by an ovenlike breeze made us reduce our business aboard the barges to an absolute minimum.

After finishing our chores James and I decided to make another training trek deep into the jungle. By now, he and I had enough confidence in our jungle savvy to venture out without the ever-trusty pygmies. We returned at dusk, on this occasion having encountered no one. During earlier excursions we occasionally had run into a lone hunter. One day, as we were trekking through the dense underbrush, collecting specimens and photographing plants as usual, I happened to turn my head suddenly. There, to my startled surprise, was a warrior—or, so it seemed, as he carried a wicked looking spear. My consternation soon subsided as I noticed a little boy following him. They turned out to be a father training his son in woodcraft. Through our pygmy guides we had a most pleasant verbal exchange with the man and the boy. We must have appeared very strange to these native jungle people, but we found their spontaneous reaction was one of friendliness rather than hostility or aggression. Although this turned out to be the rule, it in no way put us off our guard. The exception could well have been deadly for us.

By Sunday, February 10, 1980, we were ready to depart for Epena. A Lina Congo plane would indeed be able to land us in a grassy savanna just north of the village, or so we were told. Needless to say, we were up early, ready to weigh in at the Lina Congo office on Monday morning. The day began well, as Lina Congo only charged overweight for the two outboard engines. As it turned out, though, our plans to fly to Epena never materialised. Shortly after we had weighed in our baggage, a severe tropical storm developed. Furious winds buffeted the building, trees were bent double and rain poured down in torrents. As usual, Gene was optimistic, saying the storm would pass. All day we sat at Lina Congo, hoping against hope, while the storm raged on well into the afternoon. We chatted idly. I looked at Gene, James looked at me. I could do nothing but shake my head sadly. The same question was in each of our minds: Would we ever reach Epena? There would be no plane, no departure for Epena that day. To add to our disappointment, a radio message was monitored, stating that all future flights to Epena were cancelled until further notice. A call

to Brazzaville brought a ray of hope. We were given assurances that, contrary to the report, a plane would most certainly come the next Monday. Although it meant another week of delay, we could only wait and use our time as productively as possible.

By now, we began to consider seriously other less pleasant ways to get to Epena, in case the plane failed to appear once again. The water route via a connection between the Tanga and Ubangi rivers was impossible by dugout at this time of year because the water was too low. A heated discussion with Gene, Marien, and the other pygmies and some Congolese established that there was only one way: to slog through the muck and peril of the great swamp on foot. Everyone had a different opinion on how best to walk through the swamp, and each viewpoint was defended vehemently. Gene, James, and I came to a meeting of minds easily, but we needed to announce our decision diplomatically, so as not to offend our native protagonists, because our lives would depend on them and their goodwill in the swamp.

Fortunately, there were several worthwhile explorations that we could carry out while we waited, the most important being all-night surveillance of the alleged *Mokele-mbembe* site at the Boweto approximately 10 kilometres downstream. During a previous visit we had established that the water in a vortex there was an astonishing 24 to 25 metres deep. This was a deep pool, even for the mighty Ubangi, and all the more surprising to find it so during the dry season when the water level was at its lowest. Our depth measurement was made with heavy nylon cord to which a 32-kilogram window sash weight was tied. There was at least one small cave at the water's edge, although hardly large enough to serve as a lair for even a tiny *Mokele-mbembe*. A larger area of sandstone rock formed an atypical shelf or secondary shore at this spot. Securing some rock specimens for future study was easy. Water hyacinth, the favourite food of manatees and perhaps of hippos, was growing everywhere as a floating weed.

I remarked to Gene and James that if any *Mokele-mbembe* was now or ever had been in the vicinity for any length of time, its food—a liana with beautiful white flowers, sweet milky sap, and

edible fruit—ought also to be there. Marien Ikolé, our pygmy guide, was thoroughly astonished that we should know this. He stated that, indeed, this vine called *malombo* grew all along the shore and was the food of the Mokele-mbembe. He wondered how we, coming from a distant land, could know about this plant. We explained that an explorer had written about it many years ago and that we had studied his writings about the Mokele-mbembe.

Returning to the spot for our all-night vigil, we found the great swirling vortex of water every bit as impressive as during our first visit. It was about 3:00 p.m. when we arrived at a sandbar opposite the site. While Gene and Pascal (another pygmy who worked at the mission) fished, an unknown African was nearby casting a net, or *yokala*, into the water. Fishing was very good, for each cast yielded five or six fish. Although the sandbar was quite safe we decided Marien ought to stay with us. Smugglers working the area between Zaire and Congo, Brazzaville, might be attracted to our equipment, shotgun, knives, cooking utensils, and other salable gear. The sky was bright and clear, yet my thoughts turned to the possibility of a tropical storm descending on us in this unprotected spot. Here we would certainly feel the full force of the elements. Even though it was the drier season, wind, rain, and hail were not uncommon at this time of the year. I looked toward the northeast, across the narrow expanse of the Ubangi between our sandbar and the grandness of the Zaire jungle. I knew that most storms came from that direction and so I staked down my jungle hammock with the narrow back pointing to the northeast. Thus, the least resistance and the watertight rear portion of the shelter would be facing an oncoming storm. James laughed at my precautions, opting for an orientation that allowed the cooling breeze to blow into the netted portion of his shelter. Marien, smiling, followed the verbal exchange, in spite of the fact that he knew practically no English. I wondered which orientation he preferred. His only protection for the night was a large rubberised poncho, which he told Gene would be more than adequate.

Marien was a constant delight to all of us. Although his profile reminded me of the prognathous jaw of Rhodesian man, hardly

enhanced by his pointed teeth (which had been filed as a child, according to pygmy custom), a friendlier and more optimistic soul could hardly be imagined. Short of stature, 1.3 metres (4 feet, 4 inches), yet remarkably robust, Marien was never without a smile on his face, and his dark brown eyes would light up with enthusiasm whenever we were especially attentive to what he was saying. From our first meeting, he was keenly interested in us, the United States, our home, life-style, and especially the mighty buildings as high as mountains, which he knew only from pictures and from what he had heard Gene describe. Often he suggested that perhaps I could hire him for a while to care for my Chicago household so that he could see and experience these marvels.

For supper, Marien heated some soup and canned pork and beans. While we enjoyed this simple fare, he related some of the more apocryphal aspects of the Mokele-mbembe. According to Marien: "When the Mokele-mbembe surfaces, the water is violently displaced and great waves wash over the shore. If one is engulfed by this miniature tidal wave, one will be sucked back into the deeper water." And "In time of war in the past, a number of people were fleeing from death and danger. They were able to cross a river hindering their escape by walking across on the tail, the back of the body, and long neck of a Mokele-mbembe that had positioned itself directly across the river as a convenient bridge." (Point of the story: the creature is great enough to span a river.) And "If you see a Mokele-mbembe, you must never talk about it or tell anyone or you will surely die." (This latter belief obviously does not contribute toward the acquisition of eyewitness information.)

After supper, Gene and Pascal departed for the mission. James, Marien, and I now explored the sandbar, which stretched more than 1.5 kilometres into the main channel. At the westerly tip, we came across clearly visible, fresh hippo tracks in the sand. If the conventional local wisdom was correct, this discovery did not augur well for the possible presence of a Mokele-mbembe, as the latter allegedly drives all hippos away. Crocodiles were also reported in the area, but we saw none. Returning to camp, James

and I turned in, as Marien had agreed to take the first watch until midnight. We put out the fire, reasoning that, because there was little threat from wild animals on this isolated sandbar, we would be more secure without it. A blazing campfire could only attract the dreaded river smugglers. Contributing to my sense of security was a twelve-gauge shotgun, loaded with number one buckshot, at the ready in my hammock. Most comforting of all was the knowledge that Marien's incredibly keen pygmy eyesight and hearing were employed in our service.

At midnight I was awakened by an ear-splitting crash as the entire area flashed as bright as day, the sky laced with multiple lightning discharges very close at hand. Rain and wind with incredible force took down James's hammock in minutes. My hammock strained, but, fortunately, withstood the onslaught. Within fifteen minutes, James was soaked to the skin. (As the weather was warm, getting soaked was not too uncomfortable.) Marien, huddled in his poncho, was snug and dry. I became slightly wet as the rain pelted through the netting of my hammock. Still, most of my gear and I remained dry, weathering the storm, which lasted only about an hour, the rain abating before the gale force wind.

James paced up and down in the rain, somewhat like a wet hen. I got out of my hammock to keep him company, but, to his chagrin and my comfort, not until the rain had stopped. My broad-brimmed hat immediately departed from my head, coming to rest 100 metres (yards) away in the Ubangi, floating like a boat, opening pointing skyward. The current was swift, so there was no hope of retrieving my hat by swimming after it. As I remarked to James, "The hat has begun its voyage to Stanley Pool."

Our misfortunes were not yet at an end. From the Zaire shore, we noticed a great white cloud descending upon us. We had forgotten about insects, as even the omnipresent mosquitoes seemed not to have discovered the sandbank. Within minutes, millions of small white moths enveloped us. They did not bite, but they got into our mouths, eyes, nostrils, and ears. James scurried for one of his soaking wet blankets, which he wrapped around his head, though it barely allowed him to breathe. I dived into my jungle hammock,

which had withstood the storm and was now free of the moths, except for the few dozen that accompanied me through the unzipped opening. Marien simply retracted his head into his poncho like a giant turtle. The cloud of moths passed within minutes, leaving a clear, starlit sky and a cool breeze.

As James was wet and without the prospect of falling asleep, he volunteered to take the second watch. The last I remember, before drifting off once more, was James marching back and forth like a sentry on guard duty, trying to dry off his wet clothes in the breeze. For the second time, I was awakened with a start. Rain was pouring down again, fortunately without very much wind or lightning. Lightning was a serious concern, as we were at the highest point on this flat sandbar and could easily be struck by it. The noise I had heard was James cursing the rain gods and whatever else might be held responsible for this state of affairs. At that point, I decided I had had about all the sleep I was going to get, so I joined James. To our grim satisfaction the rain stopped shortly thereafter. Together we maintained our vigil until dawn without encountering anything interesting.

In the morning Marien startled James with the information that a hippo had come out of the river onto the sandbar about a kilometre away. Hardly believing that he could be aware of a hippo at that distance, we decided to hike over to the place he indicated. Arriving at the indicated spot, we found no hippo, but we did find absolutely fresh tracks leading first out of the water and then back into it. We were astounded at Marien's visual and/or auditory acuity. The freshness of the tracks established that they had been made after the rain, which had stopped only a quarter of an hour before.

The wind and rain had fouled all our gear with sand, including the twelve-gauge shotgun, which was now inoperative. "When all else fails, cook breakfast," we decided. While the last can of pork and beans warmed over a fire, the bright rosy sun peeping over the horizon warmed even James's spirit.

The fisherman we had met the previous day reappeared. He told us that he fished here regularly in spite of the fearsome Mokele-

mbembe reputation associated with the area. He said he had never encountered a Mokele-mbembe, either here or anywhere else. Crocodiles occasionally did come out on the sandbar to bask in the warm sun. About 7:00 a.m., we spotted Gene and Pascal approaching in the mission dugout. They knew we had been through a hellish night because of the weather, but, discreetly, made no clever remarks, sensing that we were in no mood for them. Our experience with the cloud of moths was, according to them, well known although rather uncommon. No worse for the experience we spent most of the remainder of the day cleaning our equipment, and drying and oiling the shotgun until it once again functioned smoothly.

The report from the fisherman was disquieting. Could the Mokele-mbembe tradition be centered further to the south? So far, Epena, to the west, seemed the best bet except for the difficulty of getting there on foot. Gene suggested that we first go south 40 to 50 kilometres (25 to 30 miles), making inquiries on the way. If the recognition of the Mokele-mbembe became more concrete, well and good; if not, we would really have to head west into the great swamp.

The next day, Gene, James, Marien, and I started our downstream river run about mid-morning. As usual, last-minute mechanical and outboard motor problems plagued us. Pascal, a pygmy motor-repair genius, was a must on a trip like this. Riding against the Ubangi current without an outboard is a back-breaking paddling proposition at best, so we took a collection of spare parts, along with Pascal, as insurance against such an eventuality. Cruising downstream, we hugged the right bank which was Congo, Brazzaville, territory. Our plan was to first visit villages on the Congo side, and then visit villages on the Zaire side during our return. As far as the people living on the banks of the Ubangi are concerned, the fact that the Ubangi is an international border means nothing. People cross over as easily and unthinkingly as American citizens move across state boundaries. With the exception of the villages of Youmbe, Mobenzele, and Buburu on the Zaire side, the places we visited are shown on no map. Some of the

“villages” consisted of only one or two palm-thatched mud-and-stick huts.

Our drill was always the same. As we spotted a native house, Gene would turn the dugout shoreward, landing as close to the house as possible. Gene would disembark first, saying “Mbote” (“hello”), followed by the rest of our party, repeating “Mbote.” Gene would explain who we were, stating that we were visiting this land to study and observe the wonderful plants and animals. He would then ask, “What can you tell us about *ngubu* (hippopotamus)?” After their reply, he would ask, “What can you tell us about *ebobo* (gorilla), *nkoi* (leopard), *ngando* (crocodile), *nzoku* (elephant), *ngombo* (or *nzale* as the buffalo is called on the Zaire side),” and so on. Finally, “What can you tell us about Mokele-mbembe?” Often the reference to Mokele-mbembe was mixed into the animal list earlier rather than at the end. Then James would show our informants picture books of known animals as well as reconstructions of fossil animals. The animals found in the region were invariably identified correctly; animals known not to be found in this area were not. The response was “We do not know that animal.” Not a single person who was interrogated had seen or could pick out any animal as representing the Mokele-mbembe. At Molembe no one could tell us what a Mokele-mbembe looked like. The consensus of opinion was: “We have heard of the animal from our ancestors, but it is not known here now.”

At Mobenzele people were incredulous that we had the courage to dare seek the dreaded Mokele-mbembe, a very dangerous animal, according to what they had heard. None had ever seen one or knew anyone alive today who had seen one. We were drawing the obvious conclusion that, to the south, the Mokele-mbembe tradition was petering out. The results were no different during our return along the Zaire side. It now appeared certain that we were going to have to traverse the great swamp.

Just before we approached the by-now-familiar alleged former Mokele-mbembe site, Marien called our attention to the malombo, the reported food of the creature. The malombo lianas grew in great profusion high in the trees, the beautiful white flowers and

nutlike fruits exactly as Freiherr von Stein zu Lausnitz had described them. The pygmies climbed up the trees and cut ample specimens for our collection. We tasted the milky white sap which was as sweet and pleasant to the taste as reported. At least one thing about the Mokele-mbembe had been corroborated.



13. A reported *Mokele-mbembe* site on the Likouala-aux-Herbes river, 8 kilometres downstream from Epena.

The next day, February 16, 1980, was Sandy's birthday. Away from one's relatives and friends in a distant land, events like birthdays take on special significance. Everyone agreed that we ought to make this a really memorable occasion. At about 10:30 a.m., the sun, already high in the southeastern sky, took on a peculiar hue. James and I simultaneously recognised what was happening: a

solar eclipse at the equator. Gradually, as the moon began to obscure the sun's disc, there was a spectacular darkening. I had observed numerous solar and lunar eclipses at latitude 42°N, but none had been as impressive as this. The Africans at Impfondo were far too knowledgeable to regard this as anything but a natural event. Still, I realised how awe-inspiring such an eclipse could have been to Africans 100 years ago. Perhaps, back in the bush, primitive reactions were still occurring among people who even to this day had little or no contact with the outside world. I teased Sandy, saying "Even mother nature marks your birthday."

Our preoccupation with the eclipse was curt short, when a pretty little thirteen-year-old girl was brought to us, her right foot and ankle swollen to twice its normal size. Above that swelling was a tourniquet so tight that little, if any, blood flow was occurring. She had been bitten by a black snake, species unknown, but probably a black mamba or an African cobra. The fang marks and swelling established beyond a doubt that the bite was from a poisonous snake. While I held the tearful child, Sandy gently released the tourniquet, reducing the child's pain somewhat. James ran to fetch one of our antivenom kits from the mission refrigerator. Sandy injected the antivenom serum around the bite and the swelling, as per instructions, while the poor girl, tears streaming down her face, howled with pain. Finished with the injections, we soothed the child, assuring her that she was not going to die because, fortunately we had the antidote. There was no antivenom at Impfondo at the time, but we took her to what passed for a hospital, a small house with not much more than a few beds. The medical attendant at the hospital was familiar with the use of antivenoms and continued to give additional injections. From the nature of the swelling, the discoloration, and the fang marks, Sandy and the medical attendant concluded that the snake responsible for the near-tragedy must have been a cobra.

Four hours later we visited the little girl, who was by now quite composed and doing rather well. The antivenom was working satisfactorily and she actually managed a smile of gratitude, in spite of the necessary pain we had inflicted on her. The medical



14. Drawing of *Malombo*, immature fruit and leaf.

Malombo, the reported food of the *Mokele-mbembe*. The white flowers, leaves and dimple on the bottom of a fruit were exactly as described by Freiherr von Stein zu Lausnitz. Fruit and leaves of the *Malombo* plant. This alleged food plant of the *Mokele-mbembe* has been described by French and German botanists and is widely distributed throughout the Likouala swamps.

attendant observed that she surely would have died if we had not treated her. The bush remedy for snake bite is to put saltwater in the right ear if the bite is on the left foot and in the left ear for a bite on the right foot. The uselessness of such treatment need hardly be underscored. Later that day, in the midst of Sandy's birthday party, the little girl's parents came to thank us for saving their child. Their profuse and solemn gratitude, evidenced by their lowered glances, was indeed moving. It felt good to know that because we had happened to be here at exactly the right time with the medication, a lovely little Congolese girl would grow up and live. The successful outcome of the day's events added an aura of warmth and good feeling to the birthday celebration. All in all, it was a very happy time.

On the next day, Sunday, an important piece of information came to us as a direct consequence of our successful treatment of the little Congolese girl. Word of our medical miracle had spread and so people were appearing for special treatment. The mission had an excellent dispensary run by Sandy, who was doing an heroic job under extremely adverse conditions. Two soldiers presented themselves for treatment, one with an upset stomach, the other with a common fungus infection, *Tinea cruris*. The latter told us his wife was from Epena, and, through her, he had become well versed in Mokele-mbembe lore. We had already heard vague rumors about the killing of a Mokele-mbembe at Lake Tele about 70 kilometres (44 miles) west of Epena some time in the past. The lake and surrounding area are considered to be very dangerous. Fishing is confined to the water's edge, and the deeper parts at one end are fearfully avoided. The man described how two of the creatures had entered the lake and that one was finally killed by the people of the area. Afterwards the butchering was endless because the animal was huge, and there was so much meat. Although this was not an eyewitness account, it was enough to add fuel to our resolve to get into the Epena district.

The following day was D-day for us. If the plane from Lina Congo did not come we had only one way to get to Epena—on foot through the great swamp. That night it rained heavily, pretty well

ensuring that no plane would come, and, even if it did, the rain-soaked grassy area used as a runway at Epena would not be suitable for landing aircraft until it had dried out. There was nothing left but to bite the bullet: we would go into the swamp. Ironically, even with all the rain, Marien reported that the canal connecting the Ubangi to the Tanga River was too dry for dugouts. This meant that we would have to go into the muck on foot, or else give up on Epena altogether. In the light of what we had now discovered about the geographical distribution of the Mokele-mbembe tradition, to forego Epena would be the equivalent of aborting our project before it had really begun.

5

Into the Swamp

Epena is only about 90 to 100 kilometres from Impfondo, but with all the setbacks we were encountering, the likelihood of reaching the village began to seem less and less probable. Gene described how difficult the trek on foot through the swamp would be. In addition, he had injured the cartilage in one knee as a younger competitive sports player and the knee still troubled him when stressed, despite his excellent physical condition. He suggested that we might reduce the overall strain by radioing Epena to arrange for a dugout to meet us at Botala, a village on the Tanga River, a tributary of the Likouala-aux-Herbes River. If this could be arranged we could eliminate about 25 kilometres (16 miles) from our trek on foot.

Further, it might be possible to obtain the help of the director of public travel (equivalent to a director of highways and roads) to make available to us his official large Cameo truck. With four-wheel drive and powerful large-diameter wheels, it could take us down the road to Kombola, possibly as far as Gunda, the last village before the swamp. I had some misgivings about the wisdom of this course, remembering that we had not previously been able to reach Kombola because the mission truck had become stuck in the mud. Still, the large wheels of the Cameo might keep the axles from getting into the muck, and as much as 15 kilometres of trekking might be saved.

On Monday, February 18, 1980, we were able to reach the Epena officials by radio-telephone and arranged for a dugout to meet us on the afternoon of February 20, 1980, allowing us two days to get through the worst part of the swamp. Our determination to attempt the trek was reinforced by meeting an African, Antoine Meombe, chief of posts. He had been born in the village of Dzeke,

south of Epena, and was very familiar with the Mokele-mbembe. He confirmed the story of the killing of a Mokele-mbembe at Lake Tele, stating that he understood that three, rather than two, animals were actually involved. Other details he provided were in agreement with information we already possessed.

The latter part of Monday was spent in getting our backpacks in order. It would be necessary to travel as light as possible, because every extra kilogram would make our journey that much more difficult. Little did I realise that soon we would be in a state of such physical exhaustion that every extra gram would be noticed, much less kilograms. Gene made it clear that we had better get to bed early, as we would depart at 5:00 a.m. in order to get through the worst part of the swamp during daylight. He guessed that, if all went well, we should average 2½ kilometres per hour (1.6 miles per hour), getting us to a small village called Bimbo. A good night's rest was imperative if we were to accomplish this feat. I distributed secobarbital (sleeping capsules) so that everyone would get to sleep in spite of heat, anxiety, and adventurous anticipation. At 4:45 a.m., Gene, James and I were up by torchlight and ready to go. Marien appeared shortly, as did the Cameo truck. Looking at the large, four-wheeled-drive Mercedes, my confidence received a boost. Maybe this truck would really help us get some distance into the swamp. By 5:30 a.m. the truck was loaded with our gear. As we climbed onto its open platform I wondered what lay ahead. Would we ever get to Epena?

I will never forget that pre-dawn ride through the jungle in the darkness. The massive Mercedes, hurtling along at top speed so as to clear morasses of mud and water, shook us to the point where I wondered if my teeth were still in my mouth. Low branches constantly whipped our faces in spite of our heroic efforts to keep our heads down. Our eyelids had to be kept closed for fear of losing an eye or two, as the branches lashed our faces mercilessly.

After a few kilometres the vehicle stopped suddenly. Marien sounded a series of strange calls, and, as if by magic, three pygmies appeared out of the jungle within minutes. Marien introduced each man, one of whom was his brother. They would help carry

our gear. The wisdom of this arrangement was lost on us at the time, but would be much appreciated when we had taxed our physical strength to its very limits. The pygmies climbed aboard, and off we went at the same breakneck speed. Twice a front wheel stuck temporarily in a mud hole, causing the vehicle to careen wildly in a half circle, all but catapulting us into the jungle treetops.

We had been assured that the truck would be able to take us to within 2 kilometres ($1\frac{1}{4}$ miles) of Gunda, an outpost of two or three huts just before the beginning of the great swamp. But fate decreed otherwise. We had traversed only 4 or 5 kilometres after picking up the additional pygmies, when suddenly the driver brought the Mercedes to a teeth-jarring stop. There before us in the light of the Cameo's headlights was a great road-building scraper sunk into the mud. We stared at it incredulously, our feelings a mixture of amazement and dismay. Who would dream that our trek through the great swamp would be halted by a piece of modern road equipment? Yet, there it was. Apparently, government workers had left the scraper mired in the muck on the previous day and word had not filtered back to us.

Gene looked at me. "If we press on, it's going to have to be on foot. If we aren't able to make it to Bimbo, we'll have to camp in the swamp. What do you say?" I looked at James and we exclaimed in unison, "Forward into the great swamp."

By now dawn was upon us, and it was cheering, in spite of this latest fiasco. Our gear, including our backpacks, was evenly distributed among the pygmies. James and I each carried a 4-litre (1 gallon) canteen of water and our hunting knives. I also carried a mattress roll, which was very light. We proceeded now in single file through the jungle. Marien took the lead, followed by the other pygmies, Gene, James, myself, and finally a Congolese security officer named Boubakar Ehoula. The pace set by the pygmies was truly amazing, about 4.5 kilometres per hour (2.5 to 3 miles per hour). Being fresh, we were able to keep up until we reached Gunda, where we stopped for a much needed rest. The villagers offered us fresh oranges and a haunch of smoked antelope, which



15. Left to right, James Powell, Boubakar Ehoula and the author at Epena, on the Likouala-aux-Herbes river. Ehoula as the Congolese officially in charge of expedition security is heavily armed with Russian side-arms. All expedition funds were carried in a money-belt secured around the author's waist.

we promptly bought. The oranges were marvelously refreshing, as were the ubiquitous bananas. Marien was anxious to push on, so back we went single file into the great swamp.

Up to this point, the trail had been relatively easy, but now neither Gene nor James nor I could see anything that might be remotely identified as a path or trail. Mighty stands of bamboo, 90 to 125 metres across, with individual bamboo trunks 30 centimetres in diameter, often blocked our way. The good part about these giant

bamboo stands was that, invariably, they were growing on higher ground out of the muck. Although I was already feeling fatigue, there was also a sense of exhilaration—we were on the way, actually walking through the swamp—a feat which no other white men, as far as we knew, had attempted. Why would they?

Our four, barefoot, pygmy porters each carried 18-kilogram packs hour after hour, while we followed as best we could, unable to carry any baggage after the first few hours. As we plunged through the muck the rising stench of methane and hydrogen sulphide was enough to sicken the hardest stomach, to say nothing of the 32° C (90° F) heat, the oppressive humidity, and the biting ants, mosquitos, and other insects. As Gene's wife, Sandy, had once remarked, "Everything in Africa is hungry." I might add that everything also bites, especially the insects. We carried jerky and powdered soup for ourselves and *kwanga* (manioc, or cassava) for the pygmies. In addition, smoked meat and wild fruits such as pineapples and bananas provided ample nourishment, although drinking water was always a problem. All water obtained locally had to be boiled or chemically treated before consumption. The pygmies, in spite of their loads, marched along at a speed we could not maintain. Not only was the pace too gruelling, it hardly left time for photography or for observation. I told Gene that the speed of the march would have to be reduced. Reluctantly, the pygmies acquiesced.

I was wearing a billed cap, which was now soaking wet. Could I be perspiring that much? Droplets of water were actually falling from the bill of my cap. At first, I could not believe that it was my own perspiration, but its salty taste quickly confirmed that it was. Checking the relative humidity and temperature with my sling hygrometer established that the humidity and temperature were 90 percent and 32° C (90° F), respectively. Small wonder we were sweating so much. To add to my discomfort was the fact that there was absolutely no air movement, no cooling zephyr to refresh us. The canopy rose 35 to 40 metres above us and, mercifully, blocked out the sun, except in occasional small open glades, which were populated by a variety of gorgeous, multicoloured butterflies.

During our frequent rest stops, to take liquid refreshment, urinate, and catch our breath, I noticed that water was dripping from many of the vines. I no longer needed my hygrometer to tell me that the relative humidity was not much less than 100 percent.

Sitting down to rest was a necessity, although not much more comfortable than standing. Once seated, we were discovered within a matter of minutes by the ants, which crawled over and under our clothing, never neglecting to bite. And, although the mosquito population was not so large as I had been led to expect, there were still plenty of them to sting us repeatedly. Malaria is endemic in the area. The female mosquito carries the malaria plasmodia and we were all on chloroquine. We suffered from the itching sting but the chloroquine would protect us from infection by the malaria parasite.

The most strength-sapping aspect of trekking through the swamp was the constant slipping and sliding into the mud, which was sometimes waist-deep. The effort to extricate oneself required that each leg be pulled up out of the sucking mud until one got back onto a tree root. The pygmies, rarely slipped, and they regarded our clumsy efforts with compassionate amusement. Often we would reach out for a liana or small branch, only to encounter wicked thorns that tore up the skin of our hands mercilessly. Whenever James slipped into a mud hole, he would sound off with what can best be described as a loud, moaning growl. I found it almost impossible to carry out photography under these conditions, in spite of our commitment to Yorkshire Television.

When our fatigue increased to the point that even our canterns seemed to weigh a ton our rest stops became more frequent. The agony went on hour after hour. Eventually I got to the point of simply collapsing wherever I found myself during a rest stop, regardless of ants, mud, or thorns. Within this immense jungle swamp, we felt as though buried deep in some primal womb. When you are trudging through a swamp, and almost up to the waist in muck, thorns on either side, with the stench of gases from decaying vegetation all around you, panic begins to set in. There are venomous snakes to be coped with; and you know that if you

have a cardiac arrest or if you are bitten by a venomous snake, there is no one to rely on but yourself. Almost to the point of exhaustion, you feel a mind-destroying fear in the pit of the stomach. "How did I get into this?" was the question that wouldn't stop running through my mind. Yet, the thrill and excitement at the prospect of treading where no westerners had ever been and possibly seeing an animal not yet known to science made the danger and fear of death less overpowering. A strange euphoria, an excitement displaced all my fears.

Our goal was to reach Bimbo, which turned out to be a collection of three huts about two-fifths of the distance to Epena. What somehow kept us going were the cocoa bean pods filled with beanlike seeds embedded in a sweet-tasting paste that the pygmies offered us. They cut the pods from the cacao trees, the beans of which are used in the preparation of cocoa, chocolate, and cocoa butter. We were told to suck, but not to eat, the cocoa beans. After sucking the paste from thirty or forty of these beans I felt remarkably better. Fatigue, muscle aches, and pains seemed to diminish considerably, and an optimistic frame of mind returned. So up and onward.

Just as the jungle night began to fall, Marien, our pygmy vanguard, signalled to the main body of our troop that Bimbo was at hand. It seemed a miracle that we had reached it before the deep jungle night began. As we approached, James spotted a pool of clear water to our right. Before we knew what had happened he had plunged into the pool, clothes and all, briskly washing the mud from his clothes and body. The pygmies shouted a warning, pointing to the opposite shore where a large poisonous viper was slithering along the water's edge. The alert pygmies, in spite of the gathering gloom, had spotted the deadly snake. James finished his bath in less than one second.

The members of the African family living at Bimbo were all hospitality and kindness. Mud-covered as we were, they brought us large pans of clear water so that we might wash off most of the mud and grime. One of their houses was also made available for our use. We pitched our jungle hammocks inside because the hut

had open windows and the size of the mosquito population was unbelievable. Our hammocks were netted, keeping us safe from all but a few strays who managed to accompany us into and out of our hammocks. I counted the rate at which these delightful insects settled on my exposed forearm. A quick calculation set the rate at about 1,000 per hour.

After completing my nightly toilette I began to boil drinking water for the next day. We learned that the people at Bimbo managed to collect enough rainwater for drinking needs, thus avoiding the parasitic infections that would have resulted from drinking the swamp water. As the boiled water cooled, I filled all our canteens, adding Halazone as a further precaution, in spite of the resulting chlorine taste.

With hot soup to fill our stomachs things seemed not at all bad. True, our clothing was in a mess, but each of us had several sets. The next day we would start again in clean clothes. Snug in our jungle hammocks and our hut, we all fell asleep within minutes of retiring, in spite of the heat.

As usual, Gene was up first, then went about waking the rest. We brushed our teeth with a little drinking water and then took a short trip into the bush to answer the calls of nature. The toilet tissue we carried was a godsend because one could never be sure that some innocuous, randomly selected leaf might not result in itching, burning buttocks and possibly a serious infection later.

Shortly after sunrise, our refreshed troop set off again after a breakfast of fruit and tea. Our destination was the village of Boleke, which we were told was a real village, although small. Several different family groups lived at Boleke, rather than one extended familial group as at Bimbo. As we threaded our way through the jungle, James pointed out that, on the whole, the ground seemed higher. After such a remark the swamp, with all its muck and difficulties, invariably reappeared with a vengeance.

In a few hours we saw ahead a dozen or so palm-thatched houses clustered in a clearing. What a welcome sight was Boleke! The worst was over, although only half the distance to Epena had been covered. The chief at Boleke recieved us with great courtesy and

respect, mixed with thinly veiled curiosity. In his memory, no *mondeles* (whites) had ever come out of the great swamp to visit him. He presented us with gifts of delicious pineapples and sweet bananas. The juicy pineapple tasted so good that we devoured an even dozen, offering to pay for our gluttony. Every man, woman, and child in the village filed by us, smiling and shaking our hands. It would be hard to find friendlier people anywhere.

At Gene's insistence, we said our good-byes, promptly moving off toward Bossimba, the next village. As we trekked onward the higher ground became even more frequent. At one point, the pygmies told us that elephants, three to be exact, would be crossing our path shortly. Sure enough, in less than ten minutes, three small forest elephants crossed the trail. Gene beamed with pride at this astonishing performance by the pygmies. They also occasionally discovered the special vine that contained the clear, watery juice, deliciously thirst-quenching compared to our chlorinated swamp water. Unfortunately these vines did not grow everywhere, and we often had to fall back on our boiled water, especially as we continued to sweat profusely.

Bossimba was somewhat farther than Boleke had been from Bimbo, about 8 kilometres (5 miles)—not a great distance, under ordinary circumstances. As we approached Bossimba we were impressed with the number of houses, several dozen at least. Again, our welcome, this time by the chief of Bossimba, was regal. Chairs were brought and set under a shady palm tree. I remarked to Gene how little animal life, aside from insects and a few snakes, we had seen. The explanation, of course, was that we were a pretty noisy group, which gave any nearby animals enough early warning of our approach that they could easily escape our view, which penetrated only a few metres of jungle.

While we feasted on additional gifts of fruit, Gene outlined to the chief and the village elders the purpose of our mission. None of them could contribute anything very concrete about the *Mokele-mbembe*. Perhaps this was to be expected because these people were a long way from any rivers, except the Tanga, which reportedly was not frequented by the *Mokele-mbembe*.

We were now on the last leg of the on-foot part of our journey. Our next destination was Botala, a village located on the Tanga River, where we hoped a dugout would be waiting for us. Shortly after departing from Bossimba, we encountered a great savanna of 2-metre (2-yard) high elephant grass. The equatorial sun beat down with intense heat at its high noon zenith. There was no jungle canopy to protect us, but we glimpsed it on the distant horizon across the mighty plain. My instruments recorded a temperature of over 38° C (100° F), which in itself was not so hot as in most deserts. Yet, with the high humidity, it was nearly unbearable. As so often before, total exhaustion, nurtured by the sheer terror in the swamp we had just traversed, enveloped us. To my surprise, the pygmies made more noise than usual, which was strange. Gene told me that the plain was very dangerous because of the possibility of encountering buffalo. If startled, they would attack, and an encounter with a buffalo could easily be fatal. Therefore, the pygmies were giving any animals hidden from our view in the tall grass the opportunity to retreat. The trail through the grass was visible even to us, although in any horizontal direction visibility was zero.

The trail led over a variety of ravines and one deep gorge, at the bottom of which flowed a small stream. In every case a single log was laid over the abyss, much as depicted in the original King Kong film, of which I was reminded. The pygmies walked over the log bridges with confidence but we felt far less secure. James's leather-soled boots were slippery and dangerous, so I was thankful to be wearing crepe-soled shoes that did not slip. A fall into a ravine, even if not fatal, would most certainly result in broken bones, which in themselves could lead to a fatal infection, or at the very least, an expedition abort.

The wisdom of including strong nylon rope in our kit was affirmed over and over again. Because James's boots were too slippery to trust, a rope was passed over the ravine which he could grasp firmly if he should slip. In one case he found it more secure to crawl across the log on his knees, which provided more traction. I had less difficulty in walking over the logs. Each time I vividly

imagined the log to be simply lying on grassy earth. This fiction worked well. My greatest difficulty was the extreme fatigue I suffered in the swamp, perhaps more than anyone else in the party. Gene was indeed spartan, in spite of the fact that his bad knee was quite swollen from the extraordinary demands he had been placing on it. All of us were sustained by the thought that Botala, where a dugout would end our footsore trek, was only a few kilometres away. None of us was up to contemplating the eventuality of no dugout, in case Murphy's Law was operating.

Beyond the savanna we entered the jungle once more; to our relief it grew on higher ground. As the bank of the Tanga River came into view we let out a cheer. There, at the end of our trail, were Africans and a large dugout waiting for us. My comment to Gene was "Praise be to God, your prayers have been answered!"

An immediate problem developed because a travelling merchant with his porter and a load of goods wanted to join our party. I was surprised when he told us that he had left Impfondo a day earlier than we had, yet we had apparently caught up with him. Our whole party felt somewhat proud, that, green as we were, we had made it through the swamp in respectable, if not record, time.

We permitted him to board the dugout, despite the fact it meant grossly overloading the craft. The sides of the dugout rode only a few precarious centimetres above the water, but we decided to proceed. None of us had the heart to make fellow human beings walk farther through this swampy jungle. The merchant beamed, assuring everyone with unfounded optimism that everything would be fine. He proved to be right, although we came close to overturning several times. The Tanga River is narrow, with sharp bends. As we approached the river mouth where it flowed into the Likoualaux-Herbes, the waterway became more and more clogged with grass. Three times our dugout was run up on the grassy bank, unable to make sharp bends at the speed we were propelled by the outboard motor (which I estimated at about 6 to 7 kilometres per hour (3 to 4 miles per hour)). Often we shipped water, but, in spite of these difficulties, the incredible pygmies kept our film and cameras dry.

Along the river we spotted isolated houses here and there and an occasional savanna. Every time we passed a family in a dugout, they waved. We waved back, shouting '*Mbote*'. In some places whole families were enjoying a romp in the river. Often we saw small children bathing, swimming, and playing, unaccompanied by adults. Many of the adults seemed to be fishing with traps woven into a conical, cylindrical shape from slivers of bamboo. The water was deep brown in colour, but not muddy, its temperature around 27° C (80° F). Apparently there were no crocodiles in the area, although bird life was abundant: herons, kingfishers, and innumerable small birds were to be seen everywhere. High above, soaring on warm upcurrents, were buzzards and some fish hawks. Telling us that there was probably a dead carcass of an elephant or buffalo directly beneath the circling scavengers. The pygmies pointed out several buzzards also circling high in the distance.

After emerging from the grass-clogged Tanga, the much wider and open Likouala-aux-Herbes stretched before us to Epena. Manoeuvring more easily now, our boatman ran the outboard at full throttle. Again, a sense of exhilaration, a fierce joy welled up within me as I realised we were virtually in prime Mokele-mbembe territory. What would we find? As we approached Epena I made out a crowd of men, women, and children. Somehow they had not only heard of our coming, but had turned out in force to greet us.

6

What we discovered

Our arrival at Epena marked the turning point in our hunt for firsthand eyewitness information about the Mokele-mbembe. The emissary from the president of the district, escorted us to a tin-roofed government house with concrete floor and wooden shuttered windows. This would be our quarters during our stay at Epena and it offered a welcome change from mud-camping in the swamp. Most of our cooking was done by the pygmies on our Coleman gas stove. I insisted that meat be boiled and then fried in palm oil. In every case I also inspected the cooked flesh to make sure it was thoroughly cooked, thus insuring that we wouldn't pick up any internal parasites.

A meeting with President Kolonga was scheduled for the afternoon of the next day. James and I were most anxious to discover if the agony and travail through the swamp had been worth while; and although we were very impatient, Gene explained to us the need to keep cool and not try to rush the Africans. Dressed in freshly washed clothes, we were escorted to the president's house by mid-afternoon. He was a smallish man, with a pleasant smile and features characteristic of the Bomitabas, which is the predominant Bantu group in the area. Many of the Bomitabas have a rather Caucasian mien, although there is no evidence of any appreciable French or other western genetic infusion.

As usual, Gene explained our mission, stating succinctly that we were interested in studying the plants and animals of the region, including the Mokele-mbembe. I would describe our particular interests, and Gene would translate into either French or Lingala, whichever was most appropriate. The president smiled at the words Mokele-mbembe, declaring that the term only meant "rainbow." I was taken aback at this remark, which seemed incredible

in light of the information we had accumulated. I managed to recover from my surprise in time to ask Gene to convey the following: "We have heard several times over that a Mokele-mbembe was killed some time in the past in Lake Tele. We have heard, too, that this Mokele-mbembe is very dangerous, although its food is strictly vegetable material; the malombo its favorite food. If your people, or rather the pygmies at Lake Tele, are able to kill a rainbow with spears, and this rainbow eats malombo fruit, we are very interested."

Gene translated somewhat hesitantly, not wishing to contradict the president. My phrasing was, according to Gene, sufficiently oblique so as to appear not as direct contradiction, but rather as a half-serious joke. I saw Gene's eyes light up with relief as the president's mouth formed a broad smile. No further comment! We were free to go. I was disappointed, as were James and Gene. Marien, well out of the president's earshot, remarked to Gene that the man was not being honest with us. We decided to sleep on the matter and pursue our quest the next day. During our evening meal, to our surprised delight, a messenger arrived from the president. After reaffirming our welcome, the messenger conveyed the president's offer to call a meeting the next day of people who had actually had an encounter with a Mokele-mbembe. We were told that, "upon reflection," the president had seen truth in my eyes, and so "had decided to provide us with the truth about the Mokele-mbembe." Later, when he knew us better, the president explained that it was very hard to believe that James and I, two Americans from the richest, greatest country in the world, would go through all the hardships of coming to Epena on foot through the great swamp to seek a very dangerous animal. In this part of Africa, the Russians have fostered the perception of Americans as people interested only in diamonds, gold, and oil.

The only event that could have pleased us more than this message from the president would have been the appearance of a live Mokele-mbembe at our doorstep. We went to express our enthusiastic acceptance of the offer. On the way back to our quarters, we began to hear the steady beat of drums, accompanied

by a large procession of young people bearing torches and candles. We learned that this was the night of celebration, mostly political in nature, of the Young People's League, a kind of Marxist young people's club. The drumming and singing continued well into the night, making sleep difficult. Nothing could dampen our spirits, however, as we looked forward with anticipation to our meeting with eyewitness observers of the Mokele-mbembe. The latter part of the night was relatively cool and our sleep was sound and restful. In the morning, as we descended into the river for a good bath, a large crowd of men and women gathered to observe these *mondeles*. An elder of the village attempted quite unsuccessfully to disperse the curious onlookers. With a smile and a wave of greeting we proceeded with our ablutions. Refreshed by the bath, I held sick call shortly thereafter, dispensing medicines for fungus and bacterial infections, as well as antimalarials such as chloroquine phosphate and diethylcarbamazine for parasitical intestinal and filarial infections. We found that common aspirin is a medicament much favoured and prized by the Africans.

Many people had already gathered in the largest room of the president's house when we arrived for the meeting with Mokele-mbembe informants at 9:00 a.m. The president welcomed us and introduced us to the people, including the elders of Epena, who received his special attention.

Notebook in hand, I waited for Gene to begin translating from the Lingala, as Pascal Moteka, a former resident of a village near Lake Tele, began his story. When he was a child, about twenty-five years ago, he heard of the killing of a Mokele-mbembe at Lake Tele. He did not see the killing of this animal by pygmies, but he knew it had happened sometime before he was born. When I requested Gene to ask whether it was a long time before he was born, Pascal replied that it was not. The pygmies had cut trees about 15 centimetres (6 inches) in diameter, trimmed the branches and sharpened one end of each to a point. These stakes were driven into the bottom of the *molibo*, or waterway, through which the creatures were in the habit of entering the lake. These molibos (seven in number) are rivers with lagoonlike openings into the

lake. It was hoped the barrier of stakes would prevent the creatures from entering the lake and disturbing the fishing activities of the pygmies.

When one of these animals was attempting to force its way through the barrier the pygmies speared it to death. Part of the celebration of their triumph consisted of cutting up and eating this creature. Their triumph was a hollow one for everyone who ate the meat died within a short time. Pascal added that both Africans and pygmies believe that if they see a Mokele-mbembe and tell about it, they will also die in short order. Because Pascal still goes to fish in the very molibo where the killing occurred, he could affirm that the stakes are there to this day, and, therefore, the story is true. I remarked to Gene and James that, if indeed the stakes have survived, the episode must have occurred in relatively recent times, perhaps no more than thirty or forty years ago.

Pascal went on to say that he knew one or more Mokele-mbembes were still in the lake, because he had seen them, most often at mid-morning. Although it had always been at some distance, because of his fear of going closer for a better look, Pascal described seeing the long head and neck rise out of the water as much as two metres. Often the creature waved and twisted its head and, at times, its back came up like a buoy.

Our second informant was David Mambamlo, an educated man now teaching children at Impfondo. About two or three years before, he was in a dugout on the Likouala-aux-Herbes just upstream from Epena at about three o'clock in the afternoon. Suddenly, a long head-neck about 2 metres came up out of the water about 10 metres away, frightening David considerably. The animal's head was snakelike, tapering from a small diameter above to the thickness of my leg and thigh at the base. Frozen with fear and fascination, David watched as the creature reared up out of the water, exposing the upper and breast portions of its body. It was greyish in color, with no visible hair or scales. At the time, malombo grew there in abundance, but much of it has been cut down now. When we showed David the animal picture book, he picked out the head and neck and mouth of a brontosaurus as

being closest to what he had observed. The mouth was much as depicted in the brontosaur head. He concluded this amazing recital by offering to take us to the location, which invitation we promptly accepted.

Our next witness, Nicolas Mondongo, said he came from the village of Bandeko, located on the Likouala-aux-Herbes upstream from Mokengi, a village located at the confluence of the Moudagouma and Likouala-aux-Herbes rivers. He told us his father had once seen a large animal with a long neck come out of the water and onto a sandbar. The animal made dinner-plate size footprints and a trench in the sand where the tail was dragged along. The location was somewhere between the villages of Mokengi and Bandeko on the upper Likouala-aux-Herbes River. Later, when Nicolas was about seventeen years old, he himself saw a Mokele-mbembe in the same part of the river. In fact, he wondered whether it could have been the same animal observed by his father. On that morning he had gone upstream from Mokengi on a visit to a Catholic mission at Bandeko. It was about seven in the morning, the day clear and sunny. Because he had started early the boy had stopped and pulled his dugout onto the riverbank in order to hunt some monkeys he had noticed in the treetops. Suddenly, a strange animal surfaced and the water “ran backwards.” At the place where the creature rose up out of the water, the depth was only 1 metre. Therefore, Nicolas saw most of the body, including the upper part of four legs and part of the underbelly at the front. He got a good look, too: it was a full three minutes before the animal submerged again. The long neck was as thick as a thigh at the base, reddish brown in colour, and the head bore a ridge or frill, like the comb of a rooster. Nicolas estimated the distance, from where he stood on the riverbank and where the animal was, to be about 12 metres. He could see its whole length in the water and estimated it to be about 10 metres from tip of head to tip of tail. If the animal had been standing on dry land, Nicolas thought it would be about 1-1.5 to 2 metres in height, with an overall head-neck length of about 2 metres. Its tail was certainly longer than its neck, but he could not judge its exact length because it was mostly

down in the water. He also described the differentiation between the back of the head and the neck region as clearly delineated, although the head was not very much larger in diameter than the neck region immediately behind the head.

It took about three hours to listen to more than a dozen reports, mostly from eyewitnesses. This, in spite of the fact that most people are supposedly afraid to talk about seeing a Mokele-mbembe, the tradition being that anyone who does will promptly die. The reports spanned a time period of at least sixty years, although exact dates were understandably impossible to establish. If the report were a personal eyewitness account it obviously must have occurred during the person's lifetime, so, depending on the estimated or claimed age of the individual, an approximation of the time of occurrence could be made.

If there was anything negative about this informative meeting it was that all or most of the eyewitnesses were in the same room, hearing everything that was being reported. I would have greatly preferred private interviews. Because it was already too late for this approach, I asked Gene to suggest politely that we be given the names and locations of other witnesses so that we could contact each person individually. The president agreed readily, perhaps because by this time he had heard quite enough about the Mokele-mbembe.

After a quick lunch on left-over stew, Gene and I decided to go fishing to replenish our larder. One of the Epena villagers had offered to allow us to fish in his area along the river. I was surprised to learn that fishing rights along the rivers are very carefully laid out, almost as though the areas were actually owned, in our sense of property. These rights are scrupulously observed by everyone. James decided not to accompany us, preferring to conduct private interviews at Epena. It had taken us eighteen days from the time of our arrival at Impfondo, February 2, 1980, to get to Epena, February 20, 1980. Time (our visas were good for thirty days), as well as our ability to sustain ourselves, was running out. Only a short time remained, as we were scheduled to return to Brazzaville on the twenty-seventh. If no plane arrived at Epena to pick us up,

we would also need to allow enough time to retrace our steps through the swamp. We decided to investigate alleged Mokele-mbembe encounter sites immediately.

The teacher, David Mambamlo, stood by his offer to take us to the place where he had encountered a Mokele-mbembe. This site was about 1 kilometre ($\frac{1}{2}$ mile) upstream from Epena, close to the proffered fishing area we intended to fish. By this time, our party, consisting of Gene, myself, the three pygmies, and David Mambamlo, was quite large. Ehoula, our Congolese security guard, also insisted on accompanying us. As we approached the area, Mambamlo pointed out a cave in the river bank that he said had been the lair of the creature until the water level of the river had dropped to such an extent that most of the cave opening was exposed. Examination of the area, including the opening, revealed no current occupant. Water was sloshing around the cave floor, which was still slightly below the river water level. I found no evidence that might be helpful in providing a clue as to what kind of animal may have inhabited the cave. Ehoula decided to fire a few rounds from his Russian AK-47 to perhaps disturb an animal if one were submerged nearby. As expected, this was useless, because it was unlikely any animal would be present at this time with so many people from Epena fishing and bathing nearby. Even if the animal were shy and elusive, there most certainly would have been reports circulating, in spite of the semi-religious taboo surrounding the subject.

After photographing the area we continued to the designated fishing area, where the pygmies, Gene, and I went ashore. The dugout would return for us in a few hours. It was then that Gene had a potentially fatal encounter with a 2.5-metre-(8-foot-)long keke, a brown and yellow viper. This snake, *Bitis nasicornis* is very venomous, and is closely related to the Gaboon viper, which is also found in the area. The common English name for *Bitis nasicornis* is “river jack,” because it is found most often along West African rivers. It is also referred to as the “rhinoceros viper” because it has two or three sharp, hornlike protuberances above each nostril. We carried antiserum for this snake, but because the serum had been



16. Lair of a *Mokele-mbembe* on the right-hand bank (facing upstream) of the Likouala-aux-Herbes river just above the village of Epena.

exposed to the heat of the jungle without refrigeration, we had no idea how efficacious it might be. Its potency was undoubtedly diminished, and no one was anxious to have to rely on it at this time. Our composite serum contained, in addition, antivenoms for the Gaboon viper (*Bitis gabonica*), the green mamba (*Dendroaspis majesoni*), and the black cobra (*Naja melanoleuca*). A fifth, very dangerous snake, the water cobra (*Boulengerina annulata*), was our most serious threat, as no antiserum was in existence. We spotted these water cobras occasionally while in a dugout, but were never very close to any of them. They were always observed in the water, never on land. Dr. Trapp, a French scientist at the Office de Recherche Scientifique et Technique Outre-Mer (ORSTOM) in Brazzaville, had advised us to use black cobra antiserum to treat

a water cobra bite. He believed that there would be some helpful cross-reaction because of the zoological relationship of the two species of cobras. Fortunately, we never found it necessary to test this hypothesis.

The “almost” encounter occurred because Gene got ahead of our careful pygmies while we were walking along the riverbank looking for a likely spot to fish. Gene’s foot came down less than 25 centimetres (10 inches) from this beautiful, but deadly, snake. The snake moved off in haste, not at all interested in a confrontation. If Gene’s foot had actually come down on the snake, the story might have had a tragic ending. We stopped at that point to let the pygmies catch up and to give Gene a chance to recover. He said very little, but, from the frozen look on his face, I knew this near-miss had shaken him. We decided this spot was as good as any to try our fisherman’s luck. In less than half an hour, we had thirteen large Nile perch to our credit. We continued to fish with success until late in the afternoon when our dugout returned to collect us. After hearing of the incident with the viper, our friends agreed that Gene had been very lucky. That evening we had fried perch, which made an exceptional treat. The danger of the afternoon was past but not forgotten.

Before we fell asleep that night, James, Gene and I discussed the next day’s interviews. High on my priority list was Commandant Mouassiposso, commander of Army Security for Brazzaville. Commandant Mouassiposso was born in the north near Epena and had risen far and fast in the Congolese military. It was our good fortune that he was visiting his home here at Epena at the same time we were there. That afternoon he, Gene, and I bumped into one another in the village square of Epena, on the way to seek each other out. The commandant, of large and sturdy stature, impressed me immediately as an honest, down-to-earth, no-nonsense type. If he vouched for the Mokele-mbembe I was inclined to accept the reality of this animal. He was not at all reticent, stating emphatically that he had seen the animal on two occasions. The first time was in 1948 as he and his mother paddled their dugout upstream from Epena. They observed the creature crossing

the river, just ahead by about 10 metres (30 feet). The second time occurred in that same year when he was downstream from Epena in a dugout, which, to his surprise, ran aground in the middle of the river. Instantly, the object which he had run onto moved away and shortly submerged. His initial reaction was not fright, because he thought he had encountered a partially submerged log. He was, of course, astonished when the object moved away and he observed it to be an animal. Its physical features, as described by the commandant, were identical to what we had heard already. He added that the creature digs caves into the river bank and that these caves or lairs often have openings inland. I remarked that the cave we had examined had no such second exit.

Having taken leave of the commandant, we next visited Daniel Omoe, a worker in the Ministry of Agriculture. According to him, in July of 1979, some 600 metres north of the village of Dzeke, about 80 kilometres (50 miles) downstream from Epena on the Likouala-aux-Herbes River, a Mokele-mbembe was present in a pool in the swamp a short distance from the river. As the dry season progressed, a sandbar had become visible as a little island in the river. For several months, the people of Dzeke had seen the creature here. They saw it come out of the jungle and enter the water near the island. There were footprints about the size of elephant prints found in the sand of the island, but there were also claw marks. In the grass at the river's edge, a trail of flattened grass two metres wide was observed. The tracks in the sand could only be observed when fresh, as rain rapidly obliterated the footprints. This was exciting news, because Omoe was well educated and very definite about the date, which was only six months earlier. Of course the report just north of Epena at the cave was much more recent, but Omoe impressed me as more reliable than the teacher, David Mambamlo, whom we had come to know during our sojourn at Epena. I told James and Gene that Mambamlo seemed far too clever and downright devious to be reliable. Both James and Gene had felt a similar sense of mistrust, although none of us could put our finger on any objective reason for it.

Later, we talked to Ivan Ngonde from the village of Mougouma-Moke, which is located on the Likouala-aux-Herbes about halfway between Bounila and Ebambe, some 225 kilometres (140 miles) downstream from Epena. Ngonde did not claim to have seen the animal himself, but he had spoken with an eyewitness. His ancestors, especially his grandfather, had spoken of it, warning, "Don't play around with it." It was described as the size of a hippopotamus, but with a very small head, not at all like a hippopotamus. The legs were short and stubby, and the animal was said to have a long tail. It was observed upstream a short distance from Mougouma-Moke, Ivan's village. Often it made a lair in the river bend where natural water action tends to hollow out the bank. Ivan told us most people do not speak about it when they see the creature because they have been told from childhood that they will die if they do. Rather, people hide when they encounter the animal, and then sneak away quietly.

At the end of the day, we interviewed another fisherman who occasionally went to Lake Tele to fish. He also confirmed that the stakes driven into the molibo to block the path of the Mokele-mbembe were still in place. In spite of the considerable fearful respect that they had for this animal, men do fish at the spot. He stated that the lake is not very deep, but, at this molibo, three long poles lashed end to end do not reach bottom. This observation suggests that the water depth in the molibos is of the order of 6 metres or so.

The fisherman reported that while he was tending his fishing net in the vicinity of the molibo, something came up under his dugout, giving it a big push. Although he did not see what it was, he believes it to have been a Mokele-mbembe. He tried unsuccessfully to pull up his net, then finally gave up the effort and returned to his fishing camp for the night. The next morning he raised his net easily. It showed no evidence of entanglement with branches or other objects that might have snagged it. Again, he believes a Mokele-mbembe was on his net in the relatively shallow water. Finally, he repeated the story about the pygmies killing and cutting

up a Mokele-mbembe. The only difference in his version was that he thought there were two animals instead of three.

One interview which shook me quite a bit was provided by Odette Gesonget, a woman in her early twenties from the village of Bounila, downstream 125 kilometres (80 miles) from Epena via river dugout. She looked through our animal books, slowly shaking her head at the bizarre animals supposedly extinct for 65 million years. She did not recognize or claim to know anything except hearsay about the Mokele-mbembe. Suddenly her mouth broadened into a startled smile as her eyes fastened on the depiction of a stegosaur. "Yes, that animal was spoken of by my ancestors. My parents told me about this animal with the planks growing out of its back. I was told to hide behind a tree if I saw it coming through the forest." This reaction really stopped me! I hurled the picture book to the ground, stomping on it ceremoniously. "A stegosaur? Impossible," I remarked to Gene. "My God, French scientists must have been through the area contaminating the people with pictures of reconstructions of extinct stegosaurians." Odette Gesonget was accompanied by other people at the time and preferred that we contact her later in the day, which we did. During our second visit, she gave us more detail, emphasising that the creature also spent time in the water and that there were green growths of algae on its back along the "planks," just as on some turtles. I asked whether it could have been a very large turtle. "Absolutely not," she answered. This animal is not like a turtle at all, except with respect to the green growth. Had she actually seen the creature herself? Yes, but only in the water where its back could be seen sticking out. Well, so much for that. Mokele-mbembe, and a what—a stegosaur? What was one to make of this? It seemed a scenario straight out of the fevered brains of Hollywood film-script writers.

What really stuck in my mind was her phrase, "the animal with planks growing out of its back." So apt a description seemed unlikely to be an invention or mythic in character. My mind-boggling thought was "Have we really found a lost world like the one described by Conan Doyle?" Often during my involvement

with the Loch Ness Monster investigation, certain peers referred to me as that chap who imagines himself to be a real-life Professor Challenger. Perhaps these derogatory comments might now indeed prove to be prophetic. Conan Doyle's lost world was set in South America and, as a matter of fact, something like he envisaged has actually been discovered. In 1953 two American scientists, Bassett McGuire and John Wordach, found a 3,041 metre (9,885 foot) mountain in the jungle near the Venezuela-Brazil border. This mountain is flat-topped, like some others in southern Venezuela. The mountain, called La Neblina, is a geological island, the remnant of a massive sandstone plateau. By now more than 120 Venezuelan, American, and British scientists have participated in expeditions and collected at least twelve new species of frogs, snakes, and lizards, to say nothing of smaller creatures ranging in size from microscopic fungi to 6-metre-long snakes.

James interjected the old proverb: "One swallow does not make a spring." The only course was to see if there were other confirmatory reports about this new mysterious creature. Although we questioned many people about the animal with planks growing out of its back, we got no further hints of recognition from people viewing pictures of stegosaurus. And so our conclusion at the time was one stegosaurus report does not make a stegosaurus. Confirmation of this creature unknown to us would not be obtained until our second expedition.

At this point we had just about had it. We had run out of time, money, intestinal and psychological fortitude. It would be better to call it a day, recover, and plan a future assault on the mystery of the Mokele-mbembe, now compounded by a great deal more information and intriguing references to other kinds of strange, unidentified animals.

How were we to let go of the "tiger's tail" and get back to Impfondo and then to Brazzaville? We could trek back through the swamp on foot, hardly an appealing prospect. Fortunately, communications by radio-telephone were working. The secretary-general at Impfondo, who we were able to contact, assured us that a small plane piloted by a Canadian flying for Lina Congo would

stop to pick us up at Epena. We would not have to trek through the swamp on foot. How relieved everyone was to hear that!

We used the remainder of the day to organise our gear, our specimens, and, most important of all, pay our respects and thanks to the president, who had extended so much help and hospitality. As a final gesture of goodwill from the president, the next day we found an official vehicle, a Land Rover, waiting to carry us and our gear out to the grassy savanna where the plane would be landing. Several hundred Africans had gathered at the airstrip, many just curious, others selling plantain, handicrafts, spears, crossbows, and anything they thought might conceivably be of interest to us. To his delight, James discovered a bottle of beer which, although warm, was far more palatable than the Halazone-treated water we had been drinking.

After about an hour's wait, James detected the faint sound of aircraft engines. The plane appeared within minutes, to our great relief. If for any reason the plane had not arrived we knew we would have had to face the hellish muck again. The pygmies, Edouard Dewi (a brother of Marien Ikolé), Pascal Botenge, and Gaston Mbako had decided to walk back through the swamp. Marien Ikolé and Ehoula, the Congolese security guard, flew back with us. Flying over his native land for the first time, Marien was thrilled to see it from the air. The Canadian pilot turned out to be a friend and acquaintance of Gene's and so we felt we were in good hands. Instead of descending immediately to land at Impfondo, the pilot treated us to a rather extensive overflight of the region. The unending sea of green jungle swamp was indeed immense and unexplored, quite capable of hiding a variety of still unidentified animals.

Back at the Impfondo mission I had but one objective—to drink at least a gallon of fresh, iced tea from Sandy's kitchen refrigerator. As a result of my exposure to the African swamp, a glass of clear cold water or iced tea remains a most precious and wonderful thing to me.

Although we were back at the mission, Brazzaville was still nine or ten days away by river, or, we hoped, a couple of hours by air,

should be we able to fly with Lina Congo. We decided to wait at last three or four days on the chance that a plane might fly. During our wait, we had the pleasant opportunity of retelling our adventures almost constantly as well as the luxury of shower facilities and other such amenities. One day Gene returned with a stern frown on his face after a visit to Lina Congo to inquire whether a plane was scheduled to arrive the next day. Gene gravely told James that there had been a bloody coup in Brazzaville. A new revolutionary government was in power and all foreign nationals were interned indefinitely. James's face turned white, then he exclaimed, "We've got to call the ambassador. We're American citizens. They can't do this to us!" Suddenly Gene's face softened and a wide smile spread over his face. "The Lina Congo plane will be here tomorrow to fly you back to Brazzaville. All is well, there has been no coup!" James's face relaxed and all of us broke up with hilarity at Gene's successful put-on. All during the flight the next day James and I rehashed the business of the "animal with the planks growing out of its back." What could it mean? We had no answers—except the obvious one that another, more extensive expedition was called for.

Back at Brazzaville, we found our problems had not yet ended. Not a single hotel room was available because of an elaborate governmental function in progress. Fortunately, the American ambassador came to our aid, providing us with a fine, air-conditioned suite at the American half-way house for visitors. From the vantage point of these comfortable accommodations, last few days in Brazzaville were most pleasant. The only negative experience was the difficulty in collecting a refund from Lina Congo for the airfare we had originally paid for the flight to Epena—which had never materialised. Daily visits to the Lina Congo office at last resulted in a 95 percent refund. Gene advised us to consider ourselves fortunate and to forget the rest of the money. James and I readily agreed, especially as we had been spared a second trek through the swamp because of Lina Congo. Our Air Afrique flight to Paris was scheduled for an early evening departure. James was worried and nervous about getting out of the

country. Nothing had been said about exit visas, so I assumed everything would be routine, in spite of the trouble we had had getting our unused air-fare refunded from Lina Congo. As James passed through the gauntlet of departure officialdom his face relaxed. When my turn came, to my surprise, a military officer ushered me aside to a curtained booth. First, there was a brusque check of my passport, visa, and health inoculation record, which apparently were in order. In the close confines of the booth, the officer's expression impressed me as being distinctly disappointed to have found nothing amiss. Then came the order, "Show me your wallet. How much Congolese money do you have?" Slowly and carefully, I pocketed my passport and health record. My dilatory behavior seemed to annoy him, so he repeated harshly, "Money—how much money are you taking out of Congo?" Unhurriedly, I laid out the sum total of Congolese currency—about 55,000 CFAs (\$ 275). With a flourish of anger, he pushed the few odd bills of Gabon and the Central African Republic aside. "These do not count," he said. "You cannot take this money out of the country. It is the law."

By now, James was thoroughly upset. He had intruded into the already crowded booth, increasing the anger of the official by several orders of magnitude. James asked, "What does he want?" I answered, "My money, I guess. He says the law prohibits my taking this many CFAs out of the country." "For God's sake, give it to him and let's get out of here," replied James. I recalled vaguely hearing someone at the American embassy remark that one was allowed to take a maximum of 40,000 CFAs out of the country. This would mean I was only about 10,000 over. To James's dismay, I refused to capitulate, loudly demanding to contact the American ambassador. Our voices rose higher and higher in heated argument, neither of us listening to the other's bad French. After about ten minutes of this confrontation, to my astonishment and relief, the official threw up his hands in resignation and waved me through the gate. With a broad grin on my face I remarked to James, "After bringing in at least 10,000 U.S. dollars into the economy of the Congo, I was not about to give in."

James shook his head and off we went through the gate, out to our plane, without further problem.

The plane was filled with white South Africans, all apparently headed for a Paris holiday. Consulting the schedule and ports of call established that our flight had originated in South Africa, which explained why there were so many Afrikaners. Apparently, the strained relations between South Africa and most other African nations did not affect international air schedules. We noted that neither English nor French was being spoken, so it seemed futile to attempt to engage anyone in conversation. I tried German with one chap, but got only a smile and a shake of the head. Neither James nor I were disappointed as we both felt the need to take stock of our experiences in the Congo swamp. The hours of the flight passed rapidly while we recalled and relived our strange adventure. By the time the multilingual announcement of our approach to Orly airport interrupted us we had concluded that, although rare, the Mokele-mbembes do exist and that they correspond to no other living forms known to science. Again, I should emphasise that the Likouala region has remained relatively unchanged since the Cretaceous period. No mountain formation or extensive inundation has occurred and the climate has been stable for millions of years. It is ideally suited for the survival of a relict species.

That all eyewitnesses, the primitive or educated, unerringly singled out reconstructions of sauropods as being Mokele-mbembes certainly is remarkable. It did not, of course mean that a sauropod still survives, but it did raise the possibility.

We were encouraged further by the fact that even the more abundant species such as buffalo, elephant, hippopotamus, and crocodile are exceedingly difficult to find and observe. A small herd of elephants once crossed our path at the edge of the swamp; we found the fresh tracks but never actually saw the animals. We were disappointed that the Mokele-mbembe had eluded us, but realised it would have been incredibly good luck to observe the creature in the short time we had spent in the interior.

Some of our pygmy friends had promised to obtain, if possible, a bone, preferably a skull, of a Mokele-mbembe. Regardless of that,

I had every intention—with the cooperation of the Congolese government—of returning with a far more extensive and better-equipped expedition.

Our transfer to TWA at the Paris airport was uneventful, as was our flight back to New York. Both James and I fell sound asleep as soon as we finished our meals aboard the TWA 747.

At Kennedy airport we were indeed a sight, especially as we trailed Bomitaba spears in front of the startled eyes of the customs officials. A smiling crew of Yorkshire Television personnel was waiting for us on the other side of customs. When we explained to the customs officials who we were and where we had been they waved us and our gear through the line with unexpected graciousness. Apparently, no customs regulations were being broken by our mighty Bomitaba spears. Our last official commitment was fulfilled easily as we paraded around the airport for the Yorkshire Television crew, while it filmed our arrival and interrogated us over and over again as to what we had found. Finally, James and I shook hands and said our good-byes, he to fly back to his home in Texas and I to mine in Chicago.

7

Return to the Congo

Even before I had left Impfondo, on February 27, 1980, at the end of the first expedition, I had made up my mind to return. James, on the other hand, felt that he would not want to go back to the Likouala.

On the basis of what we had learned, the most promising areas seemed to be downstream from Epena, in the vicinity of the Bai River, the Tebeke River, and Lake Tele. I also decided the best time to begin a new expedition would fall in the months of October or November of 1981, when the rainy season would be coming to an end. The water in the rivers and streams is high enough then so that travel by dugout is possible, keeping marches through the muck of swamps to a minimum. Gene suggested that the pygmies could build us a very large dugout to carry heavy equipment, batteries for a sonar device, fluid specimen preservatives, and 200-litre (55-gallon) drums of gasoline for the outboard motors. It took nearly six months for this special dugout to be built.

The public and media interest subsequent to our first expedition surprised even me, accustomed to media spectacles during my ten years as one of the directors of the Loch Ness Investigation Bureau. Hundreds of people of all ages, both sexes, and from all parts of the world wrote to me asking how they might join an expedition into the African swamp. Herman Regusters, an electronics engineer and consultant to the Jet Propulsion Laboratory in California was one of these. He called and wrote several times suggesting that, as he could supply special equipment that used satellite capabilities to chart position with an accuracy of the order of metres, using a portable GPS/Manpac receiver, we could determine our position in the Congo swamps via information beamed from the NAVSTAR and LANDSAT satellites.

Such equipment seemed useful, not only for the practical purpose of periodically determining our position, but also in relation to the gathering of geomorphological data. I responded positively to the Regusters proposal and he flew to Chicago for a meeting. Impressed with Herman's enthusiasm and intelligence I readily agreed to have him join the expedition. At that time no funding was on the horizon, nor had any equipment been obtained. Herman threw himself into the task with gusto, rapidly obtaining commitments of materials and equipment from a wide range of commercial sources.

My immediate concern was to raise the \$ 40,000 needed to fund the venture. After the publicity from our first expedition there were plenty of offers; however, conditions demanded by most potential sponsors were unacceptable. Some offers provided that the sponsor would retain sole monetary rights as well as media exploitation. That anyone should expect us to risk our lives, as well as our own funds (as in the case of the first expedition), without our sharing at least partially in the rewards, seemed outrageous. I had stipulated as non-negotiable the right to do a book about the expedition. Any other possible monetary gains, including television documentaries, magazine articles, and personal lecture fees, were to be subject to contractual arrangements. I made it clear that, if we actually found the *Mokele-mbembe*, our financial backers would have only the right of first refusal. This meant that the sponsors would each be given the opportunity to meet any offer made to us by other agencies, especially in the event of a spectacular success. The sponsors were not obliged to exercise their rights, but, if they chose not to do so, were required to forgo any further claim on our results. Eventually, my agent obtained such agreements with *Paris Match*, *Geo*, and *National Geographic* magazines, each to provide \$ 3,000. That left us a mere \$ 31,000 short of our goal. Herman suggested that we apply for a grant of \$ 30,000 from the President's Fund, Caltech. We submitted our grant application on March 10, 1981, and by May, were notified that the application had been turned down. Back to square one.

Not long after, I received a call from a Texan named Jack Bryan who not only wished to join the expedition, but also was willing to provide the necessary funding. I tried not to let my enthusiasm run away with me at first, having experienced so many letdowns from would-be entrepreneurs purveying mainly hot air, rather than real cash or the ability to raise it. Bryan flew to Chicago and, as with Regusters, we sized each other up. I was careful to emphasise and lay out in detail the difficulties, hardships, and deadly hazards which, inevitably, were part of an expedition into the Likouala swamp. If anything, I preferred to overstate, rather than understate, the danger. Jack Bryan was undaunted and, on the strength of a handshake, we agreed that he would join the expedition, in return for which he would provide the additional \$ 30,000 required for the venture.

I called Herman to fill him in on the details. During the conversation, I also suggested that we rename the expedition the Mackal-Regusters Likouala Expedition, in view of his efforts. Further, I asked him to interview Marie Womack, a professional photographer who lived near him in Santa Monica and who had written me asking to be considered for the position of expedition photographer.

In the meantime I had chosen other members of the expedition team. First, there was Richard Greenwell from the University of Arizona with whom I had become acquainted because of his interest in cryptozoology. I first heard about Richard when he and a colleague had sent out questionnaires to various groups of scientists, with the aim of studying professional scientific attitudes toward Big-Foot and the Loch Ness Monster. Eventually, I met Richard when he arranged for me to give a university seminar on my research at Loch Ness. During my visit to Arizona I met Justin Wilkinson, a graduate student both at Arizona and at the University of Chicago, who was in the last phase of graduate research leading to a doctorate in geomorphology. Because I was primarily interested in zoological and botanical matters I was delighted to find an expert in geomorphology, such as Justin. The geological

history of the Likouala region was an extremely important factor in assessing its zoological possibilities. Collecting of soil samples, river flow rate, and depth measurements, as well as cataloging savanna and swamp geophysical characteristics would be part of Justin's responsibilities. Justin was most interested in joining the expedition, and, based on my impressions of him at the time, I believed he would make an excellent member of our team. I knew he could be counted on to take charge of the geological, geographical, and mapping responsibilities. Richard was to be in charge of specimen collecting and any possible anthropological interests that might arise. However, these responsibilities were not strictly pigeonholed, as everyone was expected to pitch in whenever necessary.

After my return to Chicago the first signs of trouble with regard to Herman Regusters surfaced. First, there was the press release that he handed out during a press conference at the Los Angeles Museum of Natural History on June 10, 1981. When I received a copy, I noted at least a dozen errors, some minor but others quite embarrassing. For example, there were references to African alligators (no alligators in Africa, only crocodiles) and pygmy blow darts (no blow darts, rather cross-bows), headhunters and cannibals. Nothing like that in the Congo Republic. I called Herman to explain that such errors might not matter to a layperson, but any knowledgeable expert reading the press release would doubt our zoological and anthropological competence. Herman blithely dismissed my concern as nit-picking.

Next, I received from him a logo depicting a brontosaurus circled by an earth satellite, and the words "Mackal-Regusters Dinosaur Trek." There were also T-shirts similarly decorated. Although my unease increased by leaps and bounds, I tried to remain philosophical. "Maybe that's the way they do things in California," I thought. More upsetting was the feeling that my leadership of the expedition was gradually being usurped by Herman.

Jack Bryan and I consulted by telephone and a contract for our expedition was drawn up and forwarded to Herman. On July 6, 1981, I received his detailed reply. Herman took exception to

nearly all the contract's provisions, but most of all he objected to the proposed financial arrangements, particularly with regard to Jack Bryan. Talking once again by phone, I emphasised to Herman that this was my expedition, that I was the expedition leader, and that, although I was prepared to listen to his opinions and advice, the final decision in important matters would have to be mine. I added that if he were willing to continue under those clearly stated conditions, fine. If not, we would have to part company. On July 9, I received a hostile, threatening, two-page letter from Herman, a copy of which had also been forwarded to Richard. In addition to a personal attack on me, Herman "demanded" the return of all equipment in my hands, his passport and visa (obtained by me for him), and insisted that I neither use nor display his copyright logo.

I was perfectly content to comply with these "demands," although it would have been no more than fair to retain half of the equipment. As I had never intended to use his logo I breathed a sigh of relief that I had escaped from it for good.

Well, that was the end of the Mackal-Regusters expedition—which was immediately replaced by the Mackal-Bryan expedition. I was not surprised that the press would not let this little episode pass without exploiting the matter. Typical was an article by Brian Vine in the London *Daily Express*. It was headlined: "The great race to catch a dinosaur. Two scientists who fell out over a woman are now racing each other across the African jungle to track down a dinosaur." Further on in the same article, Mr. Vine wrote: "They (Mackal and Regusters) fell out when Mackal assigned Maria Therese Womack as the expedition's photographer. One of Regusters's aides said, 'She's only a Hollywood typist who did photography in her spare time.'" Very little reported in the article had any resemblance to the truth. Herman proceeded to mount his own expedition, and it must be said that, to his credit, he eventually reached Lake Tele.

The days seemed to get shorter and shorter as the thousands of details of organising an expedition of this scope accumulated. Jack Bryan had forwarded several thousand dollars so that we could



17. Cartoon drawn by Wayne Stayskal and published in the Chicago Tribune. Thought for the day: "Some scientists receive Nobel prizes, while others become the subject of cartoonists".

begin immediately to purchase necessary materials. I phoned Marie Womack to let her know that she had been accepted as expedition photographer and asked her to send me a list of needed photographic equipment as soon as possible.

An expedition in search of living dinosaurs might seem fanciful to some, but there was nothing romantic about this planning and preparation stage. A long list of medical supplies had to be stockpiled and this was perhaps the most important element for an expedition such as ours. All expedition members were also given personal kit recommendations and medical instructions as to the kinds of inoculations required. Everyone was instructed to begin antimalaria prophylactic ingestion of chloroquine ten days prior to our departure, set for October 1, 1981.

By August everything seemed to be going along smoothly. I was especially encouraged by letters from the Congo saying that construction of the giant dugout was being completed on schedule.

And then came the bombshell. Jack Bryan called to say that he would probably not be able to take part in the expedition. He had developed an allergic reaction to bananas and a variety of other foods and his doctor was advising strongly against going to the Congo. The matter was still under medical investigation so I called attention to the fact that, if Jack were bitten by a poisonous snake while on the expedition, we would have to inject him with composite antivenoms that were prepared in horse blood serum. This material occasionally can produce a serious reaction even in people without a history of allergic reactions. I had horror visions of Jack expiring from an anaphylaxis produced by the horse serum. My immediate concern was not only for Jack's health, but also for the expedition, which now seemed in serious jeopardy. When I next talked to him by phone, I asked, "What about expedition funding, Jack—assuming you aren't able to go?" He told me not to worry, that he had no intention of leaving us high and dry.

I was relieved and grateful that Jack, on the strength of a promise and handshake, possessed such a high degree of integrity. At that time, the binding contract had not yet been signed, and Jack had every legal right to withdraw. Further discussions and correspondence between us resulted in a mutually acceptable contract, with Jack's contribution reduced to \$ 17,500. The balance was my responsibility. A variety of media such as ABC and *Life* magazine had expressed interest in our venture. Roger Caras of ABC called me one day, but, as before, the asking price for additional funds from all of these sources was too high, in terms of the assignment of rights they expected. There would have been a conflict of interests with *Geo*, *Paris Match*, and *National Geographic*, with whom I had made commitments and from whom I had received cash advances. In hopes of generating interest and financial support, I wrote articles and gave a number of interviews to the media. However, nothing useful turned up, so in the end, I used my own personal funds to make up the deficit.

Due to all these problems, we had to postpone the starting date of our expedition from October 1 to the end of the month. Gene pointed out that the water level in the Likouala swamps and rivers

would be dropping rapidly in late November-early December and that we might well be stranded with our heavy dugouts in the middle of the swamp. Little did we guess how prophetic his concern would turn out to be. By October 25, 1981, everything was ready, including three-month visas from the Congo Republic. The Office of Central African Affairs, U.S. State Department, had been very helpful in this matter, as well as the Mission Permanente de la République Populaire du Congo in New York and Monsieur Armand B. Voudubo, chargé d'affaires, representing the Congolese government in Washington, D.C. My garage was filled with a mountain of numbered boxes, weighing well over 500 kilograms (over $\frac{1}{2}$ ton). Master equipment lists were distributed to each expedition member, so that it was possible at a glance to determine the exact location of any particular item. The air cargo cost for transporting such a quantity of equipment would have been very great had not TWA graciously donated free air cargo, as well as other courtesies and conveniences, to the expedition.

Fortunately our flight from Chicago to Paris (where we would change to Air France) was uneventful because all our expedition members were somewhat exhausted from the previous evening's farewell dinner accompanied by copious alcoholic drinks. Photographers from *People* magazine photographed the expedition team both at the farewell dinner (never to return?) and at embarkation. Public interest, as usual, was intense.

By the time we arrived in Paris, on October 26, everyone was in high spirits and anxious to get on with the adventure. But we had to cool our heels with a twelve-hour stopover before we could continue with the next lap of our journey. This delay was to be only a taste of what was in store for us.

8

Back to the Likouala

At last, early the following morning, October 27, we saw from the plane the mighty Congo River, Stanley Pool, Brazzaville, and Kinshasha below us, reminders of the romantic days of nineteenth century African exploration. It was thrilling to realise we were finally to begin what might become the greatest adventure in zoological history.

As we stepped down from the plane at Maya Maya, the Brazzaville airport, we were met by a fresh and pleasant breeze, so different from the intense heat and cloying humidity of my first visit. Arriving at the end of the rainy season was indeed an improvement. My contentment was complete when I spotted Gene on the observation ramp. We waved and gesticulated to one another with delight, awaiting our clearance by officialdom. Everything proceeded smoothly, including the passage of all our gear through customs. However, to our chagrin, a careful check of equipment revealed that one carton was missing. The contents included a large tent, which we could do without if necessary; but Justin's geological equipment was also missing—a much more serious matter, as it would be very difficult to extract soil samples at 1-metre (3-foot) depths without it. We returned to inquire about the missing carton several times during our sojourn in Brazzaville and it was eventually recovered. Because of its size and weight, the carton had been placed on a later plane—much later, one week in fact.

It took a whole fleet of taxis to transport our equipment and ourselves to the American embassy compound. We had hoped to store our equipment there until our departure for the Likouala swamps. The sheer bulk of the equipment rendered this impossible. Through Gene's good offices, the local Salvation Army made space available for our gear. Everyone breathed a sigh of relief and

felt most grateful, not only because of the rapid resolution of our storage problem, but also because of the courteous and friendly attitude of the Salvation Army people. At least we had no problem with our hotel arrangements. We had been assisted in making hotel bookings by the American chargé d'affaires, acting ambassador Arleen Render. Ms. Render had also forwarded our requests for necessary permits to the ministries of Water and Forests, Interior, Culture and Science, and Tourism.

For some of us, the next week was tedious. Gene and I plodded to the various ministries, explaining our plans and objectives in order to obtain permits. Marie spent most of her time photographing the local colour of Brazzaville, while Justin made friends with the French scientists at ORSTOM who were most friendly and provided Justin with a great deal of useful information.

The delays were wreaking havoc, not only with our time schedule, but with expedition funds as well. Fortunately, providence intervened in the form of James Talley, a marine stationed at the American embassy, and his wife, Linda. Linda became very interested in our expedition, chauffeuring us interminably from one ministry to the next. After a few days the Talleys invited the entire expedition to relocate in their home, which ended the worry of our rapidly escalating hotel bill.

The marine detachment maintained a lovely villa, with a beautiful swimming pool, to which we retired every afternoon. Thus, we retained our equanimity in spite of the seemingly insurmountable barrier of red tape. Richard became impatient at times, often injecting gratuitous and uncalled-for information during our ministerial discussion. Curiously, his impatience became an asset. Rather than wonder how Gene and I were faring, he began to accompany us on our tedious visits to the ministry of Water and Forests. The going was slow because the minister of Water and Forests spoke no English. As a consequence, communication was from me to Gene in English, then Gene to the minister in French and/or Lingala. Things easily became garbled, especially technical matters. Richard quickly discovered that the secretary general had been educated in Cuba and spoke Spanish fluently. Richard's

speaking to him in Spanish put everything on a simpler and more cordial level. Shortly, the minister instructed Richard to prepare a draft of an agreement in Spanish. Richard hurried back to the American embassy where in less than an hour he typed up a formal agreement. From the Spanish text, ministry personnel prepared a French version with dispatch, and it was then signed by all concerned. As was often the case, Richard's great talent for causing trouble was effective, even in the American embassy. His impatience and knowledge of the Spanish language had paid off handsomely in Central Africa—a most unlikely circumstance.

The vice-consul requested everyone to complete some forms, giving information about next of kin and personal data. When Richard's form was examined it was revealed that he was traveling on a British passport, creating a number of bureaucratic problems. Richard was told that if the expedition ended in tragedy and American personnel had to go to the Likouala to evacuate our bodies, the embassy would not issue a body bag for Richard and that he should go across the Congo River to Kinshasa (capital of Zaire) where there was a British embassy and make arrangements with them.

Incredulous, Richard asked: "Do you mean that if you land a helicopter in the jungle and see four bodies laid out, you are going to pick up three and leave one there?" Finally, the embassy consented, but informed him that the British embassy in Kinshasa would be billed for the American body bag, a fact that did not seem particularly disturbing to Richard.

In reality, these problems had evolved into good-natured confrontations between Richard and the chargé, Arlene Render. There were embassy functions almost every day, it seemed, either at the recreation centre or the embassy itself. Usually wearing his bush shorts, Richard always made it a point to be seen consuming American food and drink when he encountered Ms. Render. "Mr. Greenwell! What are you doing here?" she would ask in fake astonishment. "You are a British citizen!" On the final occasion, Richard announced, as he munched on the embassy's excellent chicken, that he was, in fact, representing Her Majesty the Queen,

which elicited the response: “Mr. Greenwell, I’ll have you know that the only Queen around here is me!”

Our evenings were never boring as we were invited socially both by Congolese officials and civilian residents of Brazzaville. The German ambassador, Harold Nestroy, was still very interested in our expedition. He entertained us with a fine dinner and wanted to hear all about our first Likouala expedition. He had been hunting to the northeast near the town of Queso but had never approached the area we had been exploring.

The first secretary of the General Assembly, Monsieur Dzabatou-Babaeux, also invited us to his home for dinner one evening. The meal was an enjoyable mix of African delicacies and Rumanian dishes, as the secretary’s wife was Rumanian. Because we both spoke some Russian I was able to exchange pleasantries directly with her. *Phili pili*, the incredibly hot African pepper condiment, had been included in our meal, so unusually large quantities of cold champagne were consumed by all except Gene, a teetotaller. To my satisfaction, after-dinner conversation turned not to the expedition (I was tired of talking about it) but to Louis Armstrong records, jazz and blues music, and Hollywood cowboy films. These reminders brought on bittersweet twinges of homesickness for Gene and me.

We did discuss one worrisome expedition matter. Lina Congo, the local airline, had a limited cargo capacity on its little twin-engined Dutch Fokkers, and we had almost 1,000 kilograms (almost a ton) of equipment. To our relief, the first secretary assured us that, if a problem developed, one of the frequent Congolese military flights to Impfondo could carry our freight.

Subsequently, we met several times with Lieutenant-Colonel Mouassiposso, now the military governor general at Brazzaville, who assured us of his support, especially in the Congolese General Assembly, and reaffirmed a commitment of military air transportation if problems should develop with Lina Congo. He had taken the trouble to commission Gilbert Bonguenele Manengue, from the village of Boha, located 30 kilometres (20 miles) from Lake Tele, to collect information about the *Mokele-mbembe* and other

strange animals. Manengue told us it was impossible to get through the *molibos* (the small waterways between the Bai River and the western shore of Lake Tele). They were so densely clogged with vegetation that such an approach was out of the question, even during high water. In addition to the detailed descriptions of animals that he had collected by interviewing eyewitnesses, he told us many traditional and modern myths concerning the Lake Tele region.

For example, according to some witnesses, the use of flashlights may be dangerous. If the flashlight beam is directed at certain areas of Lake Tele, the light is reflected back, causing the flashlight bulb to burn out. The same flashlights used away from Lake Tele function normally.

The waters of Lake Tele were reported to have therapeutic properties, healing wounds against which folk medicine had been unsuccessful. Lake water, when placed in bottles, is said to disappear more rapidly than normal. When a small red fish known as “Moaka” is placed in a bottle with the water, it also disappears. Although the lake is generally calm, the waters frequently hurl debris far up on the shore in an abnormal way. An example given was of a fishing net caught on a rock at the bottom of the lake that was found far up on the shore several days later.

Manengue emphasised that if we intended to investigate Lake Tele, it would be very important to work through Albert Moikengengi, Patrice Ewite, and Edouard Dikoumbou, the three great men of the village of Boha. Without the cooperation of these elders, our enterprise could not succeed.

From local people in the Lake Tele area Manengue had also collected descriptions of mysterious animals: a giant turtle, a giant crocodile, a giant snake-like creature, a water elephant with a great horn but no trunk, an animal with plank-like structures growing out of its back, and, of course the *Mokele-mbembe* proper. Manengue was absolutely convinced that these were all real animals. He also told us about a monster that allegedly cut buffalo in half in the area of Makongo, a village just upstream from Bounila on the Likoualaux-Herbes. This same monster was reported to have torn up a



18. Former pygmy encampment site on the shore of Lake Tele. The area was abandoned after the killing of a *Mokele-mbembe*.

small island in the river. People cutting wood nearby witnessed the island being destroyed over a one-hour period. When we inquired how an animal could destroy a small island (presumable a sandbar) in such a short time, we were told that the sandbar was about 70 metres (200 feet) long and narrow. The animal tunnelled through the sand, causing water to wash over it and into the sandbar.

Later, we exchanged opinions about reports of these strange animals with the French scientists of ORSTOM over dinner and superb French wine. On the open veranda where we were sitting the lovely African evening permeated our senses. The hum of familiar insect sounds and the scent of strange exotic flowers surrounding us provided the atmosphere for believing that 700 to 800 kilometres (450 to 500 miles) to the north strange beasts still inhabited the primeval swamps!

Reality returned the next morning when we were scheduled to meet my old friend André Mouelle, the commissar politique, who had been keenly interested in our first quest and without whom we

would never have obtained permission to march through the great swamp to Epena in 1980. André was overjoyed to see us, as was his wife. He had arranged for us to do a television show that evening, giving us an important opportunity to tell the citizens of Brazzaville exactly what we were up to. All sorts of wild rumours were circulating, the craziest being that a *Mokele-mbembe* had been observed via an American space satellite. The show went well, although some viewers were undoubtedly disappointed that the wild, sensational stories about us were not true. *Etumba* the local party newspaper, also printed an excellent report of our plans which helped considerably to set the record straight.

The day after was devoted to last-minute shopping, both for the expedition and for the mission at Impfondo. We purchased a good supply of twelve-gauge shotgun shells, so necessary for providing a fresh meat supply in the bush, and most importantly, a supply of antsnake venom kits. We also purchased a larger pressure cooker which, although difficult to regulate over an open fire, proved to be invaluable in insuring that all meat was thoroughly cooked, killing all possible parasites.

On Sunday, Gene had been asked to deliver a guest sermon at the local Salvation Army Church, so we all accompanied him. As is the custom there, our expedition was mentioned in the sermon, including a blessing and invocation that our venture would meet with success and that no one would be injured, no life lost. In the afternoon, we and the Talleys visited the Grande Marché de Brazzaville, an open market whose sights, sounds, and smells were like nothing we had experienced elsewhere. Dead animals, killed for food, were displayed in row after row of stalls. Birds, monkeys, snakes, bats, lizards, crocodiles, herbs, nuts, flowers, native handicrafts, and western-manufactured goods were all arranged in neat displays. Marie kept her camera busy, photographing the colourful array of objects and people.

After an hour or two of this assault on our senses, especially our noses, the Talleys suggested a picnic in the pine forest just outside of Brazzaville. We were astonished, as pines are certainly not the kind of trees one expected to find in the midst of tropical Africa.

The mystery was explained when we were told that the pine forest had been planted under the auspices of the People's Republic of China in honor of the Congolese people. After laying in a supply of cheese, French bread, wine and beer, we drove to the forest, approximately 24 kilometres distant, in the Talleys' new jeep. Jim Talley was anxious to try out the touted off-road capability of the jeep, so, while the picnic was being laid out, he and I proceeded to put the jeep through its paces in four-wheel drive over very rough African terrain.

The forest floor was covered with a soft layer of fallen pine needles between great trees which were flourishing in spite of the alien environment. As usual, Richard provided comic relief by promptly sitting down on an African anthill. Within moments, the creatures were up around Richard's ankles, biting viciously. He was not amused but no serious harm was done. His speedy departure from the area definitely established for us where not to set out our picnic lunch.

The conversation turned to a matter reported to us by Mrs. Crowhurst of the Salvation Army Mission in Brazzaville. She recalled that in 1973 a skeleton of some aquatic creature had been on display on the terrace of the museum there for several months. Having observed it often while passing, she estimated roughly that the animal had been about five metres (17 feet) long. The skeleton hung together even though the bones seemed clean. Information about its origin was vague, except that it came from the Congo River. Inquiries established that the skeleton was indeed bone (not cartilage), so that either a bony fish (not a shark) or an aquatic mammal, such as a whale or a sea-cow, would have been the most likely candidates. The descriptive features presented to us strongly suggested the West African manatee, *Manatus senegalensis*, which had had a ubiquitous distribution in the West African river systems during the nineteenth century, although conventional opinion held that it would be unlikely to find manatees so far up the Congo River. The estimated size of 5 metres (17 feet) is larger than the known length of the species, 3 to 4 metres (12 to 14 feet). Mrs. Crowhurst's anecdote intrigued me greatly, as I had suspected for

some time that some reports of strange aquatic creatures in these African rivers referred to manatees. The most recent generation of Congolese hardly knew the manatee because it had been hunted almost to extinction. The descriptive features of the skeleton so clearly indicated a manatee that I concluded it had been an unusually large specimen or its size had been overstated; the latter was more than likely as Mrs. Crowhurst was not a trained observer.

Our expedition-permit ordeal was just coming to an end when Gene received the sad news from the United States that his mother had just died. It was, of course, impossible for him to get back home in time to attend the funeral. The whole matter cast a gloomy pall over everyone. Ironically, the depressing rumour that Herman Regusters and his wife and one American had been killed somewhere south of Epena was also circulating just at that time. Fortunately, this rumour turned out to be false, although for a while it added to everyone's general depression over Gene's misfortune.

In spite of these personal matters we were just about ready to depart from Impfondo via Lina Congo. Our air cargo was loaded the day before our departure with the help of Jacques Mangin, a Frenchman and friend of Gene's who was employed by the Congolese government. I had met him during our previous expedition in the Likouala region where he had been supervising dredging operations in rivers. We were all grateful for the use of his truck, which allowed us to take all our equipment out of storage at the Salvation Army in one trip, including the by-now recovered missing carton.

Several times we met with four representatives of the Congolese government. First, there was Marcellin Agnagna, a zoologist who had been trained in Cuba and currently held a position as director at the Brazzaville Zoo and reported to the minister of Water and Forests. Celestin Kembe and Georges N'dossa represented the Ministry of the Interior, both having the official title "Agent de Sécurité," and Pascal M'Beke was also from the Ministry of the Interior and a skilled radio operator. Celestin and Georges were at

least theoretically charged with ensuring the safety and well-being of the expedition. Pascal M'Beke was in charge of communications via the Congolese military radio communications. Celestin, it turned out, had been a former student of Gene's at the Impfondo mission and had also been with the Herman Regusters expedition for a while. He had much to report about Herman's mode of operation, very little of it complimentary. We assured him that with us there was an adequate supply of tents, medicine, and other necessities. We made it clear that individual equipment would be issued to each expedition member at Impfondo, which reassured all concerned.

Our departure from Maya Maya was scheduled for early afternoon. It had taken us fifteen days in all to get through the red tape in Brazzaville. As promised, *Etumba* photographers appeared, as well as some Congolese officials and French friends we had made during our stay in Brazzaville. Linda Talley would be going up to Impfondo a day later to help Gene's wife, Sandy, at the mission dispensary. Linda's sense of adventure was fired by our expedition and she would have loved to accompany us into the unknown.



19. Crocodile and fish indigenous to Lake Tele.

Our flight was by way of the town of Quesso where we were able to deplane for a short while to stretch our legs. Here, while casually mentioning the purpose of our expedition, we discovered three unrelated individuals who claimed to have seen a *Mokele-mbembe*. One person, uncoached, drew a very creditable picture of a sauropod dinosaur in the sand, stating that it was what he had observed. We noted that the information about the *Mokele-mbembe* was common enough in the area.

Gene engaged the pilot in conversation and he good-naturedly agreed to deviate somewhat from his usual flight pattern so that we would be able to view Lake Tele from the air. The lake was impressive, mainly because of its almost perfectly circular shape. The water in the Likouala jungle swamp was indeed high. Even from an altitude of 3,000 metres (10,000 feet), it was visible everywhere between trees and in more open areas. After flying over Lake Tele the pilot made a wide swing over the Ubangi River, giving us a magnificent aerial view of this mighty tributary of the Congo River. As we turned toward the left heading west, I saw the welcome black asphalt of the Impfondo runway. Our expedition had begun!

9

Through the Djemba Canal

The sun beat down mercilessly on the ribbon of tarry asphalt that is called an airport at Impfondo, on the Ubangi River, about 710 kilometres (450 miles) north of Brazzaville, as the pterodactyl flies. The mighty jungle surrounded the landing strip, rising 35 metres (110 feet) skyward toward the brilliant sun. As we deplaned, the only other clues that identified this as a runway were a fenced-in collection of gasoline storage tanks and a veranda-like structure roofed with corrugated iron, exactly as I remembered them from my previous visit. Apparently these structures, designed to provide both shade and protection against the sudden, torrential rains so typical of the African rain forest, had survived my absence, providing a comfortig feeling of familiarity.

I noticed with some apprehension a pile of boxes and cartons roasting in the hot sun. Our expedition equipment, weighing some 1,000 kilograms (2,200 pounds), had arrived on an earlier plane and was, I hoped, all present and accounted for in the disorderly heap. Our personal luggage was stacked more neatly. The entire mission personnel had come to welcome us; and so, for the moment, our baggage was forgotten amidst handshakes, introductions, embracing and kissing old acquaintances in greeting. The Thomas's daughter Patty had been attending school in the north in the Central African Republic, so mother and daughter were overjoyed to be reunited. When we checked our baggage I was alarmed to find part of my personal kit missing. I prayed that it would turn up before our expedition got under way.

It was a good thing the secretary-general had sent the Cameo truck to pick up our gear, for the mission pickup truck was not only too small to handle the load but also was acting up, stalling frequently.

When we finally arrived at the mission, Marie, Justin, and Richard expressed the same sense of awe I had felt upon first reaching this frontier beyond which stretched countless kilometres of ancient, unexplored jungle.

Our Congolese security people, Georges and Celestin, were going to be staying with relatives in town, so Gene and I offered to drop them off. Having checked in with security, we set out with Georges and Celestin. About halfway to town, I remarked to Gene that the pleasant, sunny weather with temperatures at about 27° C (80° F) was in marked contrast to the steamy, torrid conditions we had encountered during our previous expedition. I don't think two minutes passed before a bright arc of lightning split the sky, followed closely by an ear-splitting crack of thunder. As the deluge descended on us the already muddy dirt road became a river of water and mud. Riding on the back of the truck, Georges and Celestin were soaked completely. Perhaps this was the real beginning of our expedition, which would lurch and stumble from one crisis to another, one danger surmounted only to be followed by a second, a third, and so on—not that I had ever known an expedition to be any different!

Gene was able to keep the truck going as long as forward momentum could be sustained. We ploughed through the muck, sending geysers of water and wet dirt to either side of the road, as well as chickens and goats which scurried and leaped all over the roadway. Suddenly we hit a deep hole, making the front end of the vehicle swing violently to the right, and at the same time stalling the engine. That was that: we were stuck in the muck up to the axles and with no front-wheel drive because a broken gear replacement had not yet arrived. Repairing mechanical equipment often poses a real dilemma in the Congo because it takes so long and is so costly to obtain replacement parts. The Congolese always do the best they can to help, but the country cannot afford to stock every conceivable replacement part. Almost immediately a dozen or more of the ever-friendly Congolese rushed out into the rain and muck to help us dislodge the truck. But all the straining, hernia-inducing effort was to no avail. Georges and Celestin finally col-

lected their gear and decided to walk the remaining distance to their new quarters.

Gene then took the bull by the horns and sent one of the Congolese back to the mission on foot to get Dr. John Look, the other dentist-missionary, to rescue us with his Land Rover. This turned out to be the only possible solution, as we discovered later that the mission truck had developed a fuel line filter problem and would no longer have run on its own.

Having come for us, Dr. Look was also kind enough to offer to take me back to Lina Congo to further pursue the problem of my missing luggage. I was not relishing a trek into the unexplored Likouala with only half my kit, so off we went. Because Dr. Look was on good terms with the Lina Congo personnel they made every effort to locate my bag. Phone calls to the office in Quesso produced nothing positive. We were not really surprised although the sense of disappointment was hard to dispel.

Returning to the mission I found everyone ready to sit down to a superb meal whose main course was roasted sitatunga haunch. This was my team's first exposure to truly African food, and the venisonlike taste of the sitatunga meat delighted them. The fine cooking lifted everyone's spirits; and they continued to rise as Gene regaled us with stories of African marvels.

Twilight in equatorial Africa is very brief, beginning at about 6:00 p.m. Light was fading fast, but not before Mrs. Look and her children brought two large specimens of lungfish to us (they described them as eels). I had never seen specimens of *Protopterus annectens* so large as these, although lengths of 2 metres (7 feet) and weights of 45 kilograms (100 pounds) have been recorded. The lungfish were of special interest because they are very primitive creatures belonging to that group of fish (Crossopterygii) from which terrestrial animals evolved. The specimens were measured, weighed, and thoroughly examined, being the first expedition material to come our way.

Our high spirits were somewhat dampened by Gene developing stomach cramps and by the discovery that Marie had lost her personal credit cards and \$ 150. When our attempts to telephone the

United States proved unsuccessful, there was nothing left but to retire for what turned out to be an excellent night's sleep. In contrast to the dry season, the nights were now a relatively cool 22° C (72° F) and sleeping was restful, rather than sweat-soaked as I had experienced previously. Even the nocturnal fruit bats fluttering and nickering outside in the palm trees seemed less annoying.

Up at 6:00 a.m. and having breakfasted at 7:00 a.m., everyone was ready and eager to get the expedition under way. But expeditions are not launched so easily.

For the past six months the pygmies had been constructing our special 14-metre-(48-foot)-long dugout, and its completion was the only thing holding up our departure. Construction of this special dugout was being supervised by Pascal, one of the pygmies working at the mission. During my previous visit I had been very impressed with the man's mechanical ability, especially when it came to outboard motor repair. When Gene and I went to check on the boat's progress, we found, to our dismay, that it was not at all ready to go. Most trees, especially the larger ones, have flaws; and in this case, the bottom of the dugout close to the prow had a hole and rotten area where a large branch had originally grown from the main trunk. We began melting pitch to fill in and seal the area. As it turned out, the hole continued to leak throughout the expedition, necessitating periodic bailing; the problem increased as wear and tear opened the holes. Furthermore the stern of the dugout had to be cut off and a board nailed in its place to which the outboard motor would be clamped. In spite of careful work, this part of the dugout also leaked, adding to an already serious problem. The start of the expedition could not be postponed any longer, with the end of the rainy season fast approaching and the water levels in the rivers dropping. If the water levels fell too low we would have to abort the expedition. There simply was no time to test the seaworthiness of the craft, or anything else for that matter.

In the evening we were invited to visit the secretary-general, who opened a bottle of ice-cold champagne for the occasion. We discussed our plans in detail with him, especially our current and

anticipated problems. We knew he would do everything possible to help the expedition, a comforting thought on the eve of a dangerous venture into the unknown. The secretary had saved the best news for the end of the evening when he told me my kit bag had been found, was safe at Maya Maya in Brazzaville, and would be flown to Impfondo on the next flight.

We departed in good spirits, taking the .458 Winchester which I had sent ahead to the secretary-general for safe keeping. This powerful rifle would certainly be adequate to meet all possible contingencies, even the killing of a small sauropod, if we should be fortunate to meet such a creature. Although killing the animal was not our intention, if it existed and was as dangerous as described, we might suddenly be forced to protect ourselves from it.

The next day, Saturday, November 14, everyone set to work in earnest to help finish construction of the dugout, fabricate the mountings for my sonar device, and tie up countless other small, but important, loose ends remaining.

The expedition was a joint American-Congolese venture, with important contributions coming from the Congolese government. Among these were an initial stake of 200 litres of gasoline for our outboard motors and the use of portable Congolese military radio equipment, as well as a radio operator named Pascal Mbeke, a most capable and valuable addition to the expedition. Pascal turned out to be an expert at running the outboard of the second, smaller dugout, so that Justin and Marie could each tend to their various tasks without concern for operating the boat.

In spite of protracted delays and setbacks in Brazzaville, all members of the team, especially Richard, were filled with exploratory zeal. Richard began collecting specimens in earnest, particularly snakes, which had fascinated him since his boyhood in England. He dearly wanted to keep one of the lungfish but as it was certainly a known species we ate the creature for dinner instead. After dinner we waited to hear whether a supply of gasoline would be available when we reached Epena. We did receive several calls, but they were from the secretary-general's office giving us the welcome news that both the gun permit for the .458 Winchester



20. Entire team of the second Mackal-Bryan Likouala expedition. Left to right: Richard Greenwell, anthropologist; Justin Wilkinson, geomorphologist; Marien Ikole, Chief of pygmy porters; Marie T. Womack, photographer; Dr. Roy P. Mackal, zoologist and expedition leader; Pastor Eugene Thomas, interpreter; Pascal M'Beke, Congolese military radio operator; Marcellin Agnagna, Congolese zoologist; Edouard Dewi, pygmy porter; Pascal Botenge, pygmy porter; kneeling, Georges N'dossa, Congolese security; Celestin Kombe, Congolese security.

and the special permit to hunt for food outside of the regular hunting season were ready. Because the phone seemed to be working so well Justin and Marie each tried and were able to call the United States. However, we never got the critical information about being able to refuel at Epena, although the success of our whole venture depended on it.

After an unusually pleasant night of real sleep we all awoke to a new, if minor, crisis. During the night someone had speared one of the half dozen cows that wander about at Impfondo (for what reason we never learned). We unpacked the .458 Winchester to put the poor animal out of its misery.

The dugout was about as complete as it was ever going to be, so we decided to launch the craft immediately. To our chagrin the great hollow tree trunk weighed a ton and was impossible to budge. After tugging, pulling, and pushing to no avail, Gene suggested using the mission tractor to drag the vessel at least as far as the dirt incline leading down to the Ubangi. The tractor achieved what human muscle and bone could not, but still we could not get the dugout to slide down the slope. While contemplating this dilemma, heaven sent the solution in the form of a gentle rain that turned the dirt slipway into slick, slippery mud. With the tractor pushing and a dozen bodies pulling, the great dugout slid down the incline and into the Ubangi with a mighty splash. The pygmies knew their art: the dugout rode in the water beautifully. We secured it with two anchor chains.

The slipway to the Ubangi had been deeply cut through the bank, and Justin's sharp eye noted some pottery fragments poking out from the embankment. Further investigation revealed perhaps the first Congolese archaeological site. Justin, with Richard's help, began excavation of the site in a most professional manner while the rest of us finished sorting and packing everything in labelled float bags. Each pottery shard was carefully tagged as to its depth below the surface and its relationship to every other excavated item. The limited time available cut the archaeological project short for the moment.



21. The giant dugout performs well, in spite of a leak in the floor of the bow.

When John Look offered to take Justin, Marie, and Richard for a trial run around several islands in the Ubangi and over to the jungle on the Zaire side, they accepted gladly. It was their first experience of travel in a Congolese dugout (pirogue), and they would get an exciting and impressive glimpse of totally wild and uninhabited jungle—Africa in its natural, pristine state, in all its terrible and beautiful splendour.

That evening Gene and I met the pygmies and the Congolese members of our expedition to negotiate the matter of wages, the extent of their employ, duties, and most of all, the substantial cash advance they expected to leave with their families during their absence. Then everyone in the expedition was instructed to be at the riverbank at 3:30 a.m. to help load the dugouts. Personal equipment, including tents, sleeping pads, knives, flashlights, and antimalaria medication were also distributed.

I made one final check of some thirty-odd float bags, all of which were clearly labelled as to contents. There were two equal sets of

everything—in some cases about a thousand percent redundancy. As dusk fell I anxiously surveyed the sky for signs of rain. We would depart even in a drenching downpour, but a clear, sunny day would certainly make it all the easier. What's more, good weather at the start of a venture such as ours always puts everyone in an auspicious mood, especially the Congolese. I slept fitfully that night, waking up periodically to listen apprehensively for rain pelting down on the corrugated metal roof of the mission. To my relief the night continued clear and bright, with equatorial constellations sparkling in the African sky.

At 3:00 a.m. Gene was up to collect Georges, Celestin, and Pascal. I groped around for the flashlight I needed to inspect the dugout. My overriding concern was the degree of leakage. At the Ubangi shore the flashlight's beam penetrated the gloom, revealing about 2 to 4 centimetres (about 1 to 2 inches) of water in the bottom of the vessel. This certainly was not good, but not so bad as I had feared. Because the dugout was not loaded, it was riding high in the water. That meant the observed leakage was a minimum and might well increase during the course of the expedition. Fortunately, we had constructed a wooden latticework that fitted neatly in the bottom of the dugout, keeping stowed items raised about 15 centimetres (2 inches) from the floor. Further, everything important was packed in waterproof float bags, preventing any possible water damage. Gene assured me that the pygmy would be able to bail out the water periodically, if necessary. In any event, I decided not to delay departure.

By now every member of the expedition was up and stirring. The mission truck made two trips to the dugout loaded with our gear. John Look supervised the stowing of our gear in the two dugouts. The second dugout was loaded primarily with photographic equipment, all of it stowed under a waterproof plastic tarpaulin, but readily accessible to Marie. Justin, with Pascal in charge of the outboard, and one pygmy completed the crew. The rest of the expedition climbed into the heavily loaded monster dugout, which now had a draft of 25 centimetres (10 inches). The embarkation had taken three hours and the African dawn had broken

magnificently, flooding our departure with a bright glory. I counted more than 200 people gathered on the shore of the Ubangi to see us off and wish us well.

The outboards coughed to a start and we were off. In spite of the heavy loading and the leakage, the craft sped through the water in remarkably seaworthy fashion.

We headed north along the west shore of the Ubangi in order to traverse a waterway known as the Djemba Canal which connected the Tanga and the Ubangi rivers, at least during the rainy season. This waterway turned out to be a strange place, partly natural and partly mechanically modified under French colonial rule. We approached the waterway via a small tributary of the Ubangi, called the Mohita. This river led through great expanses of floating grass, and our progress was slowed by the need to thread our way through the small patches of open water. Contrary to our instructions, the small dugout took the lead, running ahead more easily



22. Tunnel-like exit of the Djemba canal.

because of its size. Even before we entered the canal proper, the floating grass fouled the small dugout's outboard, tearing the propeller off the shaft. We watched it sink, lost forever in the depths of the river. This episode forced us to shift to a backup outboard for the small dugout; and we had only barely begun!

The canal itself was not at all what I had expected. It was little more than a narrow tunnel, about 1 to 1.5 metres (1 to 1½ yards) wide in most places, with jungle growth touching our heads or the sides of the dugout. If any expedition members were inclined to claustrophobia, this tiny tunnel, floored by water, leading through the primeval jungle, would certainly have brought it on. To our dismay the passageway was blocked with fallen trees, many of them submerged just below the surface. After a while, we got used to the wrenching, crushing thud as the keel of the dugout's prow ran over or against these log booby traps. Again and again we were stopped dead in our tracks by these barriers. With our axes, we and the pygmies with machetes would cut through the logs, often more than 75 centimetres (2 feet) in diameter. The jungle rang with the crack of machetes cutting wood. Strangely, despite the difficulties and backbreaking work, the prevailing mood was one of well-being and challenge.

Occasionally, we would enter a stretch of waterway where the jungle canopy was open to the sky. The blazing African sun produced shades of contrast sublime in their beauty, as myriad, brightly coloured butterflies whirled over our heads. Not so thrilling were the occasional snakes that dropped from palm fronds as our dugouts passed beneath them. Most plopped into the water, but occasionally one might fall into the dugout. We carried antivenom for three of the most poisonous snakes, but we hoped it would not be needed. As a precautionary measure we stationed Marcellin in the prow, so that he could beat on any low, overhanging fronds with a stick, knocking most snakes into the water before the dugout passed.

About mid-morning we met another small dugout carrying a lone Congolese woman. Georges immediately began to barter for some of her catfish, seventy of which she finally sold us for 1,000 CFAs



23. The python is promptly dispatched for food.

(about \$ 5). In the Congo this was an expensive supper, but at least we were assured of one. Although we had disturbed wild pigs twice, the shotgun was not at hand and so none of this wild pork came our way.

It was getting dark when we reached Masombe, a small way station located at the western end of the "canal." It had taken a full twelve hours of back-breaking effort to traverse its 20 kilometres (13 miles). The camp at Masombe consisted of two platforms raised about 25 centimetres (10 inches) above the ground, roofed over with palm fronds, one on each side of the waterway. We noted with relief that the campsite on the north was unoccupied. The camp fires on the occupied south bank presented a cheering sight, contributing to our satisfaction at successfully traversing the canal in spite of the snakes and submerged logs. It was now 7:00 p.m., and the jungle darkness had closed in on us. Night in the Congo swamps is pitch-black because of the canopy of tangled growth that excludes much light, even in daytime.

The Congolese members of our team cooked fish and visited the Congolese camped on the opposite shore. We made do with beef jerky and part of the remaining 11 litres (3 gallons) of the 20-litre (6-gallon) water supply we had brought from the mission. Because this water would soon be gone we would have to switch to local water treated with Halazone. Marie was suffering with a headache and stomach discomfort from the change to a bush diet. A few aspirins, a sleeping pill, and a night's rest improved her condition, but not until she had emptied her stomach. With every muscle in our bodies aching, some of us were too tired to find our sleeping mats, so we simply stretched out on the branch platforms and fell asleep. Because there was no bank for the dugout to rest on, it had to stay in the water, fully loaded. It shipped a lot of bilge water, and Gene spent most of the night bailing it out.

As dawn broke I noted that, in spite of a very uncomfortable first night sleeping on branches in the bush, everyone was still cheerful and anxious to press on. By first light we were ready to go, already looking forward to eating smoked pork for dinner. Georges had succeeded in buying a haunch of wild pig for 3,000 CFAs (about \$ 15) from the camping Congolese. This delight was deferred until we could make a proper camp and regain our strength. We were away at 5.00 a.m., our departure having been delayed by Richard's desire to collect a variety of exotic insects, which he did by torchlight.

The fact that we were finally escaping from the claustrophobic embrace of the canal added to the euphoria we felt at joining the misty, mysterious Tanga River, which stretched before us like a watery highway. The challenge of the unknown was everywhere. Without speaking we shared the same wonderment, mixed with apprehension and even fear. Because dawn had not yet broken we paddled cautiously, rather than risk motoring too fast in the darkness. We wanted to avoid colliding with a submerged tree trunk, rock, or even a dangerous animal. At dawn we mounted the 7.5-HP Mercury outboard on the small dugout and one of the 40-HP motors on our large vessel.

The small motor started easily, but the larger one did not. Closer inspection revealed that the fuel line to the 200-litre (55-gallon) drum of gasoline was broken and no gas was reaching the cylinder. The check valve and ball had been lost with the broken piece of hose, so, although we were able to reconnect the shorter fuel line, we experienced a great deal of difficulty getting gas through the line, which delayed us further. Vigorous simultaneous pinching and pumping of the rubber bulb of the fuel line finally produced results and we were off toward our next stop, the village of Louesso. The Tanga River was free of debris and travel was easy, especially as the weather was exquisite, sunny and clear.

At Louesso, Celestin, Georges, Marie, and Richard immediately began a tour, exploring and photographing the village, with its stacks of cocoa-bean sacks. Gene and I paid our respects to André Monengo, chief of the village. We talked at length about plants and animals and, of course, about the *Mokele-mbembe*. Chief Monengo knew quite a bit about this creature, insisting positively that none ever entered the Tanga River, but were to be found downstream from the village of Epena, in the much larger Likouala-aux-Herbes River. This confirmed what we already knew, although we wanted to check out some vague reports about strange animals near the source of the Tanga. Before leaving Louesso, we made a hearty lunch of oranges, bananas, and doughnuts made from banana flour and honey, deep-fried in palm oil. We did not stop at the next two villages, Bonganze and Bossala, in spite of the tumultuous shouted greetings and arm waving of the villagers, urging us to put ashore.

At this point disaster almost overtook us. We were running at about 10 kilometres per hour (6 miles per hour), as the river appeared smooth, flowing and open before us. Suddenly, with a rending crack, the dugout tilted violently to the right, the gunwale dipping below the waterline as water poured into the craft. We had run onto a log submerged at an angle to the horizontal which brought us within an inch of emptying the entire contents of the dugout, including the occupants, into the river, and possibly

damaging the outboard severely. However, the oblique angle of the log tended to swing the stern of the dugout in an arc so that the propeller missed the log by a hair's breadth. This near-catastrophe shook everyone and was extremely sobering. My pulse was racing, and didn't return to normal for at least a kilometre mile of further travel. Apparently, it was not safe to run at high speed even in the open river; better to take more time than to terminate the expedition by losing all our gear. The smaller dugout, having a much shallower draft, passed over the area unscathed.

We did sustain some damage from the collision, as the shock increased the leakage. Our feet were in 2 to 4 centimetres (1 to 2 inches) of water most of the time, and now it often took two pygmies to bail out water periodically. When we were in motion, the leakage was not so bad for then the hole in the prow of the dugout was higher out of the water.

Ahead of us was Botala, the river village we had reached with great hardship by trekking on foot through the Grand Vasiere (the great slimy place) during the first expedition. We reached Botala about 10:00 a.m., stopping only long enough to purchase peanut oil, eggs, pineapples, and for Georges to say "hello" to his sister-in-law. The smaller dugout was sent on ahead to Epena.

As we approached the Likouala-aux-Herbes in the great dugout, the floating grass became more and more of a problem, constantly fouling the outboard propeller. Often Gene would run forward at full speed, then raise the outboard in order to coast over weed patches. In addition, the starting ratchet of the outboard stopped working and the throttle became irretrievably lost in the depths of the Tanga River. Gene and I got the motor to work reasonably well by jerry-rigging the throttle control and removing the starting ratchet completely, which meant we had to start the motor by manually wrapping the starting cord around the starting pulley. This was aggravating and physically exhausting, to say to the least. A light, not unpleasant, rain began to fall as we approached the confluence of the Tanga and Likouala-aux-Herbes rivers. It seemed strange to me that the relatively clear Tanga should begin to clog with floating grass in the vicinity of its mouth, where it

emptied into the Likouala-aux-Herbes river. The aptness of the French name for the river—river of grasses—became even more apparent as we proceeded. To our left and right, what appeared to be grassy riverbanks were actually vast stretches of floating grass, which undulated sinuously, forming transient valleys and hillocks. These growths of grass formed thick mats, extending about 0.5 metre (1½ feet) below the surface of the water. They would not support even a dog-sized animal, let alone a man. Herons, cranes, and a variety of birds did find the grass a suitable support. In the Likouala the grass did not produce the problems we encountered in the lower part of the Tanga. The Likouala's greater depth and width provides a clear channel down its middle. At this point we could never imagined what a dreadful fate awaited us among these ubiquitous floating grasses. Rather, my thoughts were preoccupied with the problem of our gasoline supply. Only a refuelling at Epena would allow us to penetrate the unexplored Bai River. Would we find gasoline at Epena?

10

A Close Encounter?

Epena, our immediate destination, was our last contact with the Congolese government. We carried a letter of introduction to the permanence, the second highest official, temporarily in charge while the president was away. His full title was Permanence du Comité du Porte de District d'Epena. Although we addressed him as Monsieur Permanence, his name was Omer Modingola. As word of our approach spread among the villagers, a great crowd gathered at the riverbank. The familiar flag of the Congo Republic greeted us, reminding us that we had not quite lost contact with the outside world.

As the prows of our dugouts slid up on the riverbank dozens of children descended the steep bank, anxious to help unload our gear. We intended to unload completely in order to check the condition of our dugouts as well as to inventory our equipment and supplies. The pygmies would collect all the dirty laundry so that it could be washed and hung up to dry immediately. In the humid African climate mildew sets in rapidly if clothes are allowed to remain damp for even a short time.

We were introduced to His Honour, the permanence, who was very friendly and seemed genuinely pleased to see us even before we presented our letter of introduction. A new government house for visitors had been constructed since my last visit. This concrete dwelling was clean and secure, covered with the familiar corrugated sheet metal roof. The windows had wooden shutters, but no screens; so we pitched our jungle hammocks on the floors of the three rooms assigned to us. The netting kept out any hungry flying insects, including mosquitoes. The toilet nearby was of the usual design, a mud hut with a thatched roof and a floor with a narrow slit over which one could squat, straddling the slit—hardly a comfort.

table stance for anyone not used to it. In this case the floor was a slab of concrete, which did not prevent the usual entourage of crawling, walking, flying, and wriggling fauna from keeping one company.

As soon as possible after our arrival, Gene and I checked the supply of gasoline. To our relief, about one hundred 200-litre drums were laid out, a river barge having only recently replenished them. We were able to purchase a further 356 litres (96 gallons), bringing our gasoline supply up to a maximum.

Now we could relax, knowing our journey would definitely be able to proceed as planned. It was a good time to make some queries about Mokele-mbembe, the object of our search. Some of the fishermen told us that they occasionally observed these animals at night, stretching a long neck up out of the water along the river-banks and molibos to reach for malombo fruits. They are not seen often in the rivers, but when they are, it is usually in the deeper holes at the river bends. If it is quiet and the area isolated, the creatures show themselves even during the day, especially in tranquil water. The permanence, too, expressed the conviction that Mokele-mbembe was a real animal.

During our previous expedition, we had heard a vague rumour that there was an unknown animal near the village of Dzeke, 75 kilometres (50 miles) to the south. The pool or small lake where the animal was alleged to be was called Mbouekou. No one dared go near the place, except a brave hunter named Emmanuel Mougoumela. Everything we now learned checked out with our previous information, and more details were provided. We were told we would find Mougoumela at Dzeke, so it seemed that our immediate task was to proceed on to that village, find Mougoumela, and perhaps a Mokele-mbembe!.

Except for some of our flashlights, which kept appearing and disappearing, all our equipment was in good order. That meant we could get an early start the next morning. Accompanied by some of the pygmies from our crew, Justin crossed the river to a savannah opposite Epena to study the topography. The plain, bathed in brilliant tropical sunshine, extended for about 3

kilometres (2 miles) and was covered with elephant grass so high (about 2 metres, or 2 yards) that even large animals such as forest elephants and buffaloes remained hidden. Areas such as this are few and far between in the Likouala swamps, so, from the geomorphological viewpoint, Justin had a golden opportunity to explore and study rare, if not unique, terrain.



24. In many villages we were offered gorilla skulls. These we invariably refused making it vehemently clear that we objected to the killing of gorillas and chimpanzees.

The scent of the freshly rain-watered grass was exquisite. All the animal life, including a myriad of insects, discreetly maintained their existence below the top of the grass. Extravagantly coloured butterflies, which we encountered so often elsewhere, were nowhere in evidence. Justin made voluminous technical and descriptive notes on all aspects of this plain and collected a variety of vegetation and soil samples.

Later, one of the local science teachers stopped by. We discussed and compared the educational processes of the United States and the Congo Republic and he was anxious to show me his facilities. These consisted of a few chemicals in various states of disintegration, some broken laboratory glassware, and a few large charts and diagrams. When he asked me how this compared to teaching

laboratories in the United States, I didn't know what to say. My admiration and compassion went out to this beacon of learning in the Likouala jungle, heroically attempting to disseminate knowledge among the young Congolese. I couldn't help wondering what marvels might be accomplished if the cast-off equipment from just one of our large urban schools could be sent to the Congo. While I was examining the local educational efforts, Justin and Marcellin went off to sample the local beer and were told by the village drunk, Mongbete Borgia, that they were foolish to go downstream where danger lurked, as the *Mokele-mbembe* lived in nearby tributaries not frequented by people. Even if we had taken his words seriously we were so fired by the report of the creature at Dzeke that we would not have delayed our departure. I made a final check on our inventory, including finances, all of which were in good shape. The gasoline had cost 60,250 CFAs (\$ 300), about 170 CFAs (\$ 0.85) per litre (\$ 3.14 per gallon).

The evening before our departure from Epena to Dzeke, a small black snake was caught near the village center and Richard was called upon to collect it. The snake was wounded and soon died. Richard placed it temporarily in his leather binoculars-case until he could transfer it to a bottle of formaldehyde. Somehow, the rumour spread around that Richard had caught a black mamba, a deadly snake. Richard, becoming aware of the rumour, decided to take advantage of the situation. Marcellin had already expressed concern about "the mamba" in the leather case, and as we left Epena in the dugout, he couldn't help noticing the closed case lying in front of Richard. Marcellin, who always sat immediately behind Richard, asked him if the mamba were still in the case. Richard said yes, and then casually added: "Now that you mention it, I haven't heard it in a while". He picked up the empty case (the binoculars were hanging around his neck), placed it to his ear, and added gravely, "I hope it's all right".

Marcellin's eyes grew large as Richard's fingers fiddled with the elastic strap securing the case. "Don't open it! Don't open it", screamed Marcellin. "Don't worry", replied Richard calmly, "I'm just going to peek in and see if it's all right". "No", shouted

Marcellin. “You don’t understand! Mambas lunge out at you! Don’t you open it!” But it was too late. Richard had already opened the case about a centimetre ($\frac{1}{2}$ inch), pretending to be peering inside. Marcellin remained motionless as if resigning himself to Richard’s irresponsibility.

Suddenly, Richard let out a terrifying scream and threw the open case behind him as if trying to escape some horror. Marcellin reacted, throwing himself backwards with the open case on his chest. His screams and flying legs engaged everyone’s attention. He rolled about in the dugout, attempting to escape the imaginary mamba, narrowly escaping going over the side. It was all over in a few seconds. After Marcellin had calmed down, Richard admitted that it was one of the best pranks he had ever pulled. Marcellin did eventually forgive Richard.

When the International Society of Cryptozoology held its annual meeting at the University of Paris VI in June 1984, Marcellin, who was working on his doctorate in Montpellier, went to Paris to meet Richard. At dinner one night Richard took pleasure in recounting the incident in great detail. Smiling, Marcellin confirmed the story, adding a few embellishments, in the true style of “Bete-Tolo” or “beat your chest”.

We did not leave Epena until 10:15 a.m., a very late start. As the dugouts began moving downstream from the village we gradually became aware of a subtle change in the scenery, or perhaps in the air. It was real but impalpable—not something one could identify but something that encroached on one’s subjective reaction to the environment. We all felt it, especially Gene, which was surprising because a veteran of twenty-eight years in the region would be expected to become immune to any romantic moods that might seize newcomers such as ourselves. There was a pervasive sense of travelling back into time, when the world was young, a hothouse or maybe a Garden of Eden, where evolutionary processes were filling all available environmental niches with countless diverse forms of plants and animals, continually becoming better adapted to their habitat.

I recall one scene in particular that was so breathtaking it caused Gene to burst forth with exclamations of awe and wonder tantamount with a religious experience. As we rounded a bend in the river, coming close to the right-hand shore, which was in shadow (we were travelling due south), we saw rising above us jungle giants 37 metres (120 feet) in height. The intricate subfoliage, including a dense lacework of epiphytic ferns growing among the branches of this primordial jungle canopy, gave the never-ending green monotony a delightfully variegated background. This was indeed a hothouse of terrestrial life—surely the proper setting for a surviving sauropod. We noted with interest that the malombo, the reported food of the Mokele-mbembe, grew in great profusion along the riverbanks. Like giant snakes, great lianas rose into the air from the river, supported by the trunks and branches of trees. The round, edible fruits were also visible, but only a few of the beautiful white flowers of this plant were in evidence. All we needed to complete the scene was a real live Mokele-mbembe. At that moment we all felt that, indeed, these animals must exist in this lost world. However, no long-necked sauropod raised its head from the brown depths of the Likouala-aux-Herbes. No premonition that a possible close encounter would occur within a few hours invaded our contemplative rapture.

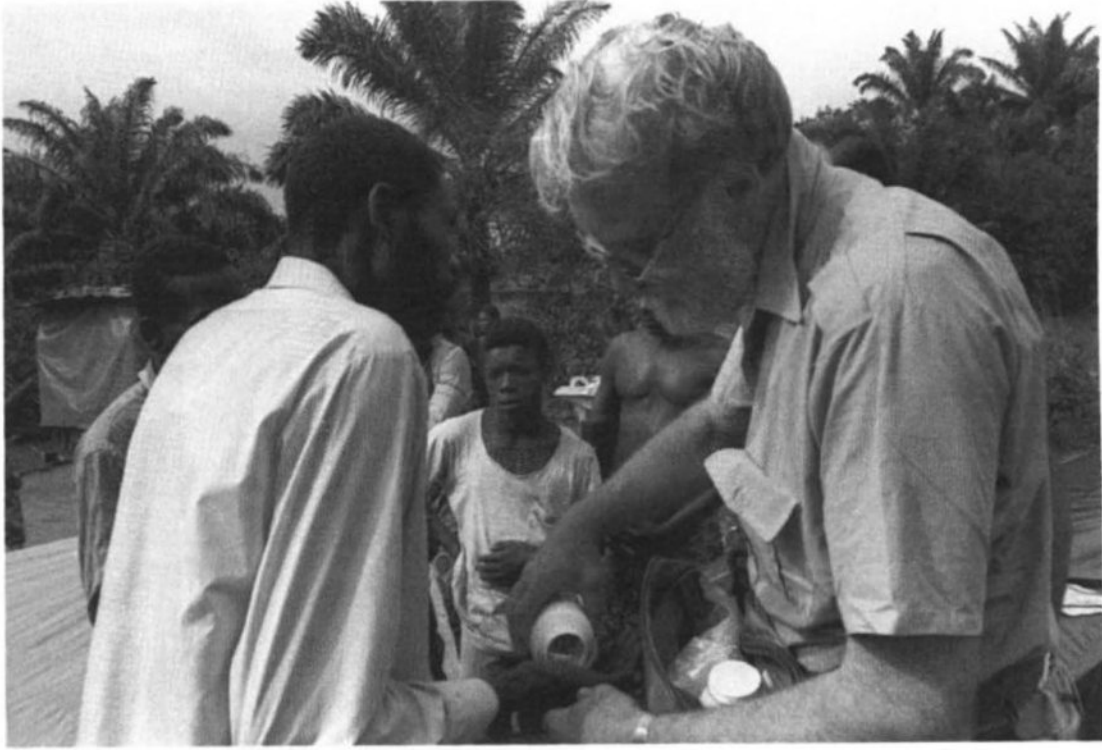
We hurried on, and, in spite of our eager desire to reach the village of Dzeke where a Mokele-mbembe was reported to lurk, we had to stop at the village of Itanga. We had promised Lieutenant-Colonel Mouassiposso we would pay our respects there. He had built a modern home at this village on the Likouala and the local populace was fiercely proud of the spectacular achievements of their native son in the Congolese military. We were received with great ceremony and deference because word had reached this remote place that we were personal friends of the colonel.

The chief, or headman, Mompite Mopeta, showed us the beautiful house that had been brought up the river from Brazzaville piece by piece. We seized the opportunity to question him about the animals in the area. Yes, there were gorillas back in the jungle,

river buffaloes to the east, and forest elephants. But there were not and never had been hippos in the area, as far back as the collective village memory might reach.

Although he had never seen one, Mopeta knew all about the Mokele-mbembe. Once he had heard a noise, a bellow of sorts, which he attributed to the creature. Of course, the Mokele-mbembe proper, the one with the long neck, never makes a noise. Again we recognised the obvious confusion resulting from the term Mokele-mbembe being applied generically—in this case to the Emela-ntouka. We were told that currently the Mokele-mbembe were no further upstream than Boha. Another Congolese, Gilvert Mbe, a native born at Itanga, confirmed that although such animals had been seen even further upstream than Epena, recent reports indicated that downstream would be the place to look. Controlling our impatience with difficulty, we finally made our departure after dining royally on a fresh pineapple and the sweetest oranges imaginable.

The river was clear and wide. Our dugouts cleaved through the water at top speed, 15 kilometres per hour, pushed by the 45-HP Mercury in the case of the larger. The wild glory of the jungle canopy rose up from either bank. The grandeur unfolding before us as we moved downstream, its sheer magnitude, eventually had a soporific effect on everyone. As we rounded a sharp bend in the river the green monotony was suddenly broken by a break in the shoreline canopy, revealing a bright sunlit expanse of elephant grass comprising a small savannah. All eyes were instantaneously focussed on this area, the bank rising a surprising 1.5 metres (5 feet) above the river's surface. The water inshore was in the shadow of the bank (all of these details were not grasped at that moment but were noted as we examined the area subsequently). At that very moment, a great "plop" sound and wave cresting at 25 centimetres washed over the dugout, directly from the bank of the shadowed area. The pygmies screamed hysterically, "Mokele-mbembe, Mokele-mbembe", as I frantically signalled Gene to swing the dugout shoreward in a tight arc. Both the Congolese and the pygmies were extremely frightened and did not want us to turn



25. The author passing out medication to a sick Congolese villager.

about. Ignoring their protestations, Gene throttled the outboard, bringing the dugout close inshore to the area from which the wave had originated. To our disappointment, although we probed about the area for at least half an hour, no further evidence of anything unusual presented itself. None of us could honestly say we had glimpsed whatever it was that had been responsible for the disturbance. Poking into the water with our 3-metre paddles, we established that close inshore there was a narrow, shallow shelf that dropped off into deep water, 5 to 7 metres. We cruised around the area in ever-widening circles, but to no avail. Dejected and elated at the same time we proceeded on towards Dzeke. Perhaps deep in our subconscious existed a subliminal impression of the creature that made the wave. One of the pygmies claimed to have momentarily observed the back of the creature as it submerged, probably by stepping off from the shallow shelf into the deep water.

As we continued, a heated debate as to the cause of the wave ensued. Suggestions ranged from the reasonable to the idiotic, such as the possibility that the wave had been made by some unknown

outboard-driven dugout. We took stock of the large animals known to be present in the area—elephant, buffalo, gorilla, and the Nile crocodile—and each was ruled out on grounds either of not being able to make such a wave or that evidence of their presence would have been visible to us after the event. I raised the question of *ngubu* (hippopotamus), which we knew both from the local populace and our experience supposedly did not inhabit this region. Nevertheless, could a stray hippo possibly be responsible? We could not come to a definite conclusion. I believe that had a hippo, by hook or by crook, somehow been present in this area we would have spotted it again during our search. Still, the hippo hypothesis remains the most conservative, if still improbable, explanation. Shortly afterwards we passed the village of Bokale and did not stop because we had lost valuable time in our fruitless search for the cause of the watery disturbance. Gradually the terrain became even more primitively beautiful, with malombo and other lovely lianas growing in great abundance. We passed Maounda, then the village of Boha around 2:40 p.m., and Ipongi at 3:04 p.m. Dzeke finally came into view just before dusk, a welcome sight. We were tired but infused with an intense zeal for exploration and discovery by the recent confrontation with the unknown just a few kilometres upstream.

At Dzeke, we disembarked without unloading, and sent a messenger to the chief. We were led to an empty hut near the river's edge where we rested comfortably while waiting. In due course three high officials arrived. We presented our credentials, including our letter of introduction from the permanence at Epena. A crowd of curious men, women, and children was milling about, and everyone was extremely friendly. We were told that we would be able to meet with the Comité du Village at 7:15 the next morning.

We learned that a leopard had been raiding the village and had been wounded by a villager the previous night. For added security our hosts were careful to provide us with a small brick house near the river. It had completely open windows and doorways which only added to the discomfort of some members of our group.

Attempts to cover up these entrances with corrugated metal sheets were justified by a desire to block the entry of “mosquitoes.” I reassured our African friends that wounded leopards “never return”, although I must admit that I was not quite certain of this. Amused by the nervousness of some of our team, Richard and Marie announced that they would pitch their tents in a nice open field about 15 metres from the brick house. This resulted in extensive agitation on the part of Georges, who insisted that he and Celestin were in charge of our safety; he could not permit such a foolish thing. Finally, the determination of Richard and Marie prevailed and they slept peacefully all night. The next morning they both stated that they had heard a large animal sniffing around their flimsy tents. It may well have been the leopard, although we will never know for sure. Nevertheless, the desired effect, to “blow Georges’s mind”—regardless of the personal danger—was obtained!

Later that evening Georges, with the help of the pygmies, prepared a fine meal of wild pig and a hot sauce, as well as soup from our supply of powdered stock. To our delight, Emmanuel Mougoumela, the hunter we had heard about at Epena, stopped by while we were eating. We had already been told that the “animal” had left and was no longer in the pool near the village. This was disappointing, but only mildly, because we felt we were in the middle of the right area. Mougoumela filled in most of the details regarding the animal, which are included in a later chapter describing our return to this village to investigate more fully. According to him the animal had departed into the river about one year earlier in June, which would have been 1980. This meant a sixteen-month old trail; and because we were anxious to press on, whatever might be learned from an on-site investigation would certainly keep for a few more weeks.

The next morning our entire contingent assembled in the village compound for a formal meeting with the “comité”. The chief sat at a table surrounded by five members (elders). Opposite, in a semicircle, were the twelve members of our expedition. Celestin

and Georges, as representatives of ourselves and the Congolese government, acted as chief spokesman.

The opening statement of welcome was made by the spokesman for the comité, and the exchanges and deliberations that followed went on for the better part of the morning. Georges and Celestin translated for us, and Gene, who understands Lingala, said our words emerged somewhat embellished. We were asked to formally state the purpose of our expedition, which was done. We also delivered a copy of the official accord between us and the Ministry of Water and Forests.

The comité stated that they welcomed us and were happy that we came. They promised to do everything possible to help us and provide information. They stated that many old people knew a lot, but tended to be secretive. A natural reluctance to share information might be exacerbated by the fact that we were white-skinned strangers from another land. We were well aware of these factors and relied heavily for mediation on the Congolese and pygmy members of our expedition. We had observed an undercurrent of ridicule toward reports of the Mokele-mbembe on the part of the people and authorities in Brazzaville. The people of this village certainly did not care to be laughed at.

Georges made a compelling speech, observing that the Congolese government had sent us with a good plan. "They have their eyes on us, and we must find out whether or not these animals are real. The people from the south say we are liars, but the ministers from the north do not agree with them. Are you willing to share with us your knowledge of where to find these animals?"

Emmanuel Mougoumela spoke up, saying he was ready to help. He also described his observations of places where the malombo had been stripped away by some animal, specifically at the confluence of Ndoki and the Sanga rivers and also at the confluence of the Assomba and the Sanga rivers. We already knew about the first area because the village of Ikelemba is located there, a source of Mokele-mbembe reports for many years.

A man named Appolonaire then spoke, describing an animal he had seen at Pikunda, a small village to the southwest on the Sanga

river. While hunting monkeys one day, he first saw treetops move, and then a long head-neck came into view eating malombo. He saw the animal at the riverbank with most of its body in the water. In the soil he drew a crude picture that resembled a sauropod. Then a man named Bruno Antoine spoke up saying he was 63 years old, had given 35 years of honourable service to the French administration and had received the Congolese Medal of Honour from former Congolese president, Marien Ngouabi. He proceeded to invite us to his house in the evening when he would with pleasure give us true information about the Mokele-mbembe. A few others chimed in, but nothing more of substance was added to the discussion. In conclusion, each member of our expedition made a short speech of thanks, expressing gratitude for having been received so hospitably.

That evening we were taken to Bruno Antoine's house. To our surprise, Antoine had maintained written records in French; they filled several boxes. He told us it was a pleasure to help us, that the animal *Mokele-mbembe* was a creature that lives mostly in the water and that there are certain places where these animals have been seen. Before the arrival of the Europeans they were seen all the time, but when boats with motors started to come up the rivers, the animals retreated to more remote regions. He said their fathers had told them that if they saw a *Mokele-mbembe* they should not say a word about it or they would die. Then followed descriptions of specific places where an animal had been seen. He made no claim to having ever seen the creature himself. The following encounter sites were given to us from Bruno Antoine's voluminous written notes (left or right bank is indicated going downstream):

1. Near the left bank, approximately 100 metres (300 feet) before the village of Edzama.
2. Near the right about 1 kilometre beyond Mouamponga.
3. Near the left bank, halfway between Mounpessi and Mangesse.
4. Near the right bank, about 3 kilometres (2 miles) before Bowanga.
5. Middle of the river, about 500 metres (540 yards) downstream from the village of Botunga. Place called Dikele.
6. A place near the right bank known as Elundo, about 125

metres (135 yards) downstream from the pygmy village of Bondoki.

7. Near the right bank, about 1 kilometre downstream from the pygmy village of Bondoki at Mokeyakoti.
8. At Kokomaka, 1 kilometre downstream from Mokeyakoti, near the right bank.
9. At Bongomwano, also known as Ditekede.
10. Near the left bank at the village of Ikondi.
11. At Dzibondounaka, about 1.5 kilometres (1 mile), before the village of Massengue, near the right bank.
12. Downstream from Massengue but before Bounila at Mosongo, where there is a big bend in the river, and a large grass savannah on the right and a deep pool in the river. This location was reported to us earlier, during our first expedition; thus, independent corroboration was available in this case.
13. There is a great vortex in the river on the left at Mokongo. To the right there is a deep place, 12 metres (13 yards) or more. During the dry season, a sand bank appears nearby about 10 by 4 metres (30 by 12 feet) in extent. Under this bank are cave openings where animals have been observed.
14. Near Bounila, about 1 kilometre to 800 metres ($\frac{5}{8}$ to $\frac{1}{2}$ mile) downstream from Ekenge near the left bank.
15. Near Bokote, on the right at a place called Mounpowloukou, there is a plantation growing manioc, bananas, oranges, and pineapple; animals crossing there are said to be killed by a Mokele-mbembe. The people say if you set a lamp near the shore at night, the water begins to move, meaning that an animal is being disturbed.

Our informant reiterated that he fully appreciated the importance of this matter and that he was reporting truthfully and factually. Bruno told us that his father was a very wise man who always told him to write down important matters. That was why he had notes about the Mokele-mbembe and could give us such precise names and locations, even after a long time had passed. For further information, he recommended that we talk with Paul Mossokali at the village of Bounila, who he said had a great deal of knowledge. He suggested we come quietly, without fanfare, so that the whole matter would not become a public brouhaha. At the village of Massengue, he advised us to seek out a man named Molombe, an intelligent man who had travelled the Congo from one end to the other.



26. Entire expedition team of the first expedition. Left to right: Dr. Roy P. Mackal, zoologist University of Chicago; James Powell Jr., crocodile specialist; Boubakor Ehoul, security; Edouard Dewi, pygmy porter; Pascal Botenge, pygmy porter; Iaston Mboko, pygmy porter; Marian Ikolé, chief pygmy porter, Pastor Eugene Thomas, interpreter.

Lastly, he told us about the mysterious animal with the planks growing out of its back. He said that one had been at Ebolo, about 200 metres upstream from Epena at a place called Ikekesse. It was generally observed in the late afternoon, just before dusk (4:00 p.m. to 6:00 p.m.) during low water. It had much green vegetable growth on its back, which was fully observable when the animal came out of the water. Although he had not seen this animal, we considered his information important as it was the only field report of the creature we had, except for one from the Epena woman given to us during the first expedition.

Although we attempted to get some idea as to when these events occurred Bruno could not give us that data; he did not have it to give. The best he would venture is that they occurred at various times during an interval covering the past fifty years. Finally,

Georges opened several bottles of beer to refresh our host and ourselves. We promised to return the next morning in order to take photographs of Bruno, which delighted him greatly. It was the least we could do to repay him for his hospitality and cooperation. Later that day, Georges surprised us with a fine dinner of chicken and manioc. With solid food under my belt, I expected to sleep well. Instead, the astonishing things we had been hearing all day kept me awake most of the night.

As promised, we returned to Bruno Antoine's house as soon as the sun provided enough light for photography, and he appeared in his best suit, ready for the photo session. Marie, Justin, and Richard took two or three dozen photographs of us with Bruno before we bade him farewell. The photo session delayed our departure until almost noon. We had decided to push on because the Mokele-mbembe trail was cold at Dzeke and, in any case, we would be returning later on our way back to Impfondo. We would investigate the area around Dzeke more thoroughly then.

On our way to Edzama, I felt my pulse pound whenever we passed one of the Mokele-mbembe sites pinpointed for us by Bruno Antoine, even though it was highly improbable that one of these animals might still be present at any of these specific spots. Still, as long as we were in the proper area, one spot was as likely as another. Also, I began to wonder whether there was any validity in the native belief that the creatures preferred the deeper parts of the river where sharp bends tended to produce rather deep pools. Our previous possible close encounter had occurred at just such a river bend.

We stopped briefly at the village of Edzama hoping to buy oranges, but found none. En route again, the jungle seemed more breathtakingly beautiful, mysterious, and totally wild than ever. Imagine our shock and surprise when we suddenly spotted a brick house on the right shore, alone and isolated in its setting of lovely palm trees. To our further amazement, the house had finished window frames with real glass, wooden doors, iron door hinges, and locks. Here in the middle of the remote jungle of the Congo was a western-style house complete with locks on the doors!

Mouassiposso's house, much further upstream, was understandable. It had been constructed at great expense, time and effort from materials brought upstream from Brazzaville by barge and dugout, but this dwelling was strange indeed. A mysterious aura permeated the place and grew stronger when our investigation established that the house had been abandoned. In spite of the decay that was setting in, the structure, with its veranda, columns, doors, and windows, was impressive. Adding to the strangeness of the place were the untended garden and citrus trees, a rotted dugout, and a large sign on which were painted two words: "BETE TOLO".

None of us could decide whether the mood surrounding this improbable house and garden was malignant or benign—rather, there was a sense of unreality to the scene. As usual, we were in a hurry to move on, especially because we had had such a late start, but vowed to return to see if we could solve the mystery. We did, in fact, find out a lot more about this marvel in the Likouala jungle swamp during the upstream leg of our travel.

At the moment we were concerned with reaching the confluence of the Bai river before dark so that we could pitch a proper camp. Justin's calculations and consultations with the French aerial photographs indicated that we should be there by about 4:00 p.m., in plenty of time to settle down for the night. Little did we anticipate the difficulty and danger that lay ahead.

We reached the coordinates where the Bai river flows into the Likouala at about 5:00 p.m., an hour before dusk. To our dismay, before us lay at least three possible inlets, but all were in the midst of endless floating grass. Justin was sure we were at the river mouth, but which was the right entrance? We entered each in turn, but all appeared to be large, dead-end molibos, or at least so they seemed as we progressed and gradually became locked into the floating grass. All of us, except Justin, expected the main channel of the Bai to be open and recognisable. He allowed that perhaps the river mouth was clogged with floating grass, much as the mouth of the Tanga had been. In any case, darkness was descending rapidly, so we decided to head back about 1 kilometre to

where we had seen a small hut or two in what appeared to be a deserted camp in a clear area.

The site looked good although deserted, so we pulled up our dugouts next to another dugout already moored on the shore, but full of water. Hordes of monkeys chattered in the trees, swinging and leaping from branch to branch. Georges's face lit up as he picked up the twelve gauge shotgun, recognising our supper swinging through the trees. Suddenly a small dog appeared, followed by a Congolese. The Congolese was friendly enough, saying this was Masolo, once a small village, but now abandoned with only three houses remaining. His name was Marc Maounga, a recluse who had been deserted by his wife and children. With typical Congolese hospitality he extended to us the use of this camp and, to our relief, promised to guide us the next day through the maze of floating grass.



The expedition team in a sea of floating grass.



Path through underbrush made by the *Mokele-mbembe* getting to the river.



View of Lake Tele where *Mokele-mbembe* are seen and reported.



Monsterpool where a *Mokele-mbembe* had been for several weeks.

11

Lost in a Sea of Floating Grass

Masolo, the camp of Marc Maounga, was set in a large clearing—a welcome sight because it meant our tents could be pitched well away from the perimeter of the jungle and its night-time dangers. On balance, the perils of the jungle at night are probably no greater than during the day, but the utter gloom under the great tree canopy intensifies one's innate fears. There are some predators, such as panthers, that are nocturnal hunters. Under most circumstances panthers will avoid humans, but there are always exceptions. A wound from a carnivorous bite is always a serious matter, not because of the bite *per se*, but rather as a consequence of the septicemia that almost always results if the wound is not medically treated. Carnivores always harbour a variety of nasty bacteria around their teeth. Fortunately a panther would hardly ever cross a clearing lit by firelight. A clearing devoid of grassy cover or plant growth is always a safer place to camp when one is forced to spend the night in the midst of dense jungle growth—unavoidable at times.

Poisonous reptiles, insects such as scorpions and tarantulas, and large African millipedes (15 centimetres or 6 inches) are also less likely to cross open ground; and even if they do, one can spot them much more easily. Small rodents will not venture out over open ground, where they may well end their existence in a predator's voracious jaws. Most of these animals are not aggressive—the danger lies in inadvertently stepping on, rolling over, or dropping one's arm onto an animal, resulting in a bite which, even if not poisonous, may result in serious infection.

Here, in this remote region near the confluence of the Bai and Likouala-aux-Herbes rivers, animal life thrives. The buzz and drone of insects, the fluttering wings of extravagantly coloured

butterflies, and the intermittent background sound of birds added to the wild beauty of the setting. Monkeys were especially abundant, chattering in the trees. Near the edge of the camp something caught my eye.

Upon further examination, I discovered the remains of the skull and jaws of an elephant. The tusks were missing, as they had undoubtedly found their way into the illegal ivory market. This elephant skull had no special significance, except that it set me thinking. What if this had been the skull of a Mokele-mbembe? I recalled that the skeletal remains of elephants are rarely discovered in the bush, not because there is some mysterious elephant's graveyard, Edgar Rice Burroughs notwithstanding, but because predators, nature's putrefying bacteria, and other natural forces combine to eliminate dead animal remains rapidly. I realised that if the remains of a fairly common creature such as the elephant were hardly ever found, how much more unlikely it would be to discover the remains of a Mokele-mbembe.

After staking out our tents we settled down to the tasks we had been forced to neglect during our long run downriver. Now that we were well into Mokele-mbembe country we were able to relax from the extreme sense of urgency that had driven us for so long. I worked on my expedition log, finally bringing it up to date. Marie went about photographing everything until nightfall deprived her of light. Gene engaged in conversation with Marc and established that, although the man himself had never seen a Mokele-mbembe, he knew all about the creature. It was mildly disappointing to learn that Marc had no first-hand knowledge, but this was better than if he had never heard of the creature at all. As the curtain of jungle darkness descended with its usual rapidity, we became aware of new and unfamiliar animal sounds. In spite of the relative safety of our campsite, we set the usual pygmy guards and kept a fire going through the night. Marc assured us that no uninvited guests such as snakes or panthers would attempt to invade our camp and said that his little dog would most certainly raise an alarm should something unusual occur. This little creature, obviously a mongrel, with short, sandy-coloured hair,

pointed snout, and exceptionally small ears was typical of the kind one finds throughout the Congo. Although not much in the way of real protection, they are invaluable as guards, raising the alarm by vociferous, sharp barks whenever something unusual or strange—man or beast—encroaches on their territory. Some are well trained for tracking game either by day or by night. So it did not seem ludicrous to us when Marc assured us that the presence of this rather pathetic and fragile looking creature would be important to our safety. After a rather spartan meal of fruit and previously prepared food, we all retired early, utterly exhausted from our three unsuccessful attempts to find the main channel of the Bai river.

Next morning Gene was up at the crack of dawn as usual and came to me to report a serious difficulty. "What now?" I asked. It seemed that everything that could go wrong had already done so. Gene explained that Marc had decided not to guide us into the main channel of the Bai. Then he motioned me, without a word, to the riverbank. Our two dugouts were neatly drawn up on the bank, one on each side of Marc's dugout. His was half full of water and our large dugout also had the usual water in it, due to the leaky bow. Marc somehow blamed us for the water in his dugout, although we had had absolutely nothing to do with it. We helped him bail out the water and cleaned up the inside, but we never did learn where the water had come from. Subsequently the dugout was fine. Where had the water come from? There was no leak and it had not rained during the night. Mischievous wood spirits? The pygmies thought so, although our Congolese comrades took a pointedly disdainful attitude toward the matter.

Georges had shot a monkey the night before and the pygmies prepared it for our breakfast. Their method of cooking monkey was exceedingly unpleasant. The dead carcass was first thrown onto an open fire so that most of the hair could be burned off. I sat staring at the spectacle of smoking, burning hair, nostrils filling with the acrid smell and it seemed to me the stench would destroy anyone's appetite. I had visions of a burning Joan of Arc, of Savonarola and of Giordano Bruno being consumed by flames.



27. A camp on a sandbar in the Ubangi river overlooking a reported *Mokele-mbembe* site. Except for smugglers crossing the Ubangi at night, these sand bars were the safest places to camp.

After singeing off the hair, Eduard removed the entrails and the head. These were consigned to our specimen collection. The value of this policy was at first not appreciated because we were unaware that, in the case of pregnant female monkeys, the fetus preserved *in situ* was most valuable for anatomical research. Only after the expedition, when we distributed our specimens to interested institutions, did we discover that we had preserved something important.

Georges took over the final stages of the monkey meal, adding *pili pili* and canned tomato paste, which we had brought from Impfondo. The low campfire was not hot enough to get the pressure cooker working right, but, with added logs, the fire began to blaze merrily and even threatened to blow the lid off the pressure cooker. By watching the cooker carefully and removing it from the fire periodically, we succeeded in cooking the monkey without

destroying the cooker or ourselves. All the while the pygmies stood back, shaking their heads at our strange ways.

By 9:00 a.m., we had eaten, broken camp, and were ready to follow Marc through the sea of floating grass. As we poled our dugouts through the yielding grass, I thought of the fabled Sargasso Sea, so greatly feared in the early days of sailing vessels. Myth has it that this huge expanse of floating seaweed (actually a brown alga of the genus *Sargassum*) was the habitat of horrible monsters who would attack any ship unfortunate enough to become engangled in the weeds. Could there be a Mokele-mbembe hiding in this African Sargasso?

Following Marc, we were impressed at how he always seemed to know exactly where he was going. From time to time we might note an open expanse of water, but on our own we would never have been able to make out anything like a main channel. After a few hours Marc told us we should have no further difficulty following the river; indeed, we now saw before us a channel of open water that looked like what a river ought to be. And so, after expressing our gratitude with a generous gift of Central African francs, we parted company, making our way slowly upstream. Periodically, we tried using outboards, but each time the propellers rapidly fouled in the grass and we were forced to paddle again. For the better part of an hour things went well as we travelled steadily northward. Then the weeds closed in and no channel was to be seen. We pushed on in a northerly direction, but the going was rough. Tedious pushing and pulling, then a small stretch of open water and more grass. Often the paddle would slip as we pushed and levered against the side of the dugout, resulting in a painful rap on one's thumb. Gut muscles were strained and soon became sore as we pushed our paddles down into the floating grass pulling the grass towards us, hoping each time to propel the dugout a few centimetres before the grass yielded. After more than an hour of this back-breaking, stomach-wrenching activity, we had moved only about $\frac{1}{2}$ kilometre ($\frac{1}{3}$ of a mile). To contemplate the many kilometres ahead of us was mind-boggling. As it became more and more clear that we were lost, I felt a gut-deep pain akin to

claustrophobia. Nor was I alone with my fears. I know Gene said a few silent prayers and Justin reacted by pulling out his maps and aerial photographs. There were as many opinions as people as to what direction to take. I observed that we could not be on the main channel because nearby were small tress, which normally do not grow in water. Because we were in a 1-metre depth of water, it must be a flooded area. Justin kept looking for signs of a current because in the main channel, a current downstream should have been observable. We decided to more or less zig-zag east-west, generally bearing northward. This plan was hard to execute because the occasional expanse of open water lured us like a Lorelei maiden singing her siren song over the Rhine. After a dozen manoeuvres of varying duration we were still no wiser nor had we seen evidence that might suggest the Bai river channel. Often our path led under tress and scrub so low that the foliage all but swept us from the dugouts. This was a serious matter because we had seen a mamba only a metre (3 feet) above us. Moving blindly this way through a foliage and scrub, we were in great danger of a possibly fatal snake encounter.

About 0.75 kilometre ($\frac{1}{2}$ mile) distant, we noted what was apparently higher ground. Palm trees were visible and, to my delight, I was able to discern with twelve-power binoculars something like a small hut under the trees. Immediately we steered for the palm trees and my panic gradually subsided. Tugging, cursing violently, we finally closed on what appeared to be an abandoned encampment. Upon inspection we saw that this was a temporary fishing camp which we were disappointed to find unoccupied. The house had the typical latticed mud walls with a palm frond roof. There were also little plots of cultivated plants: cassava was the most conspicuous, but there were also bananas, oranges, and lots of pineapples.

While we surveyed the area, which we later learned was called Tsolo-Tsolo, Richard discovered some interesting insects and also small bats in the house. I prepared a makeshift net from some mosquito netting, wire, and bamboo. With this equipment Richard successfully enriched our specimen collection with a variety of bats.

I was concerned that someone might be bitten by the little creatures. Because bats are often rabid, a bite might be fatal if the bat carried the dreaded virus. Justin, Richard, Marie and I were immune because we had taken a prophylactic course of antirabies shots, but Gene and all the Congolese and pygmies were susceptible. Fortunately our specimens were secured without mishap. I had impressed everyone with a short lecture describing the horrible thirst-suffering agony of death from rabies. My comments had achieved the desired result—everyone was extremely careful when handling potentially rabid animals, dead or alive. Only one or two cases of recovery from untreated cases of rabies are recorded in the medical literature, so to be bitten by a rabid animal would mean certain death in our isolated circumstances.

Outside the hut was a table with legs fixed in the ground and it served admirably for spreading out our maps and terrain photos. Justin and I pinpointed the most likely coordinates of our position, admittedly with a great deal of uncertainty. As we wandered about the place we noted a high point about 300 metres (325 yards) to the east (which actually turned out to be a termite hill). Because it offered the highest elevation in the immediate area Justin and I decided to walk to it. We might be able to identify some of the larger forest areas visible in the distance. Meanwhile, Eduard and Pascal were sent out to reconnoitre in the small dugout because the smaller, less heavily loaded craft was much easier to push through the floating grass. After their departure Justin and I left for the termite mound, maps and charts in hand. We were exceedingly careful to watch exactly where we placed each foot, for it seemed more than likely that snakes might also find this higher ground attractive. Although I spotted one small snake, variety unknown, no untoward encounters occurred.

From the top of the hillock, after about half an hour of deliberation and the judicious use of binoculars, Justin felt fairly confident that he knew our approximate location relative to the main channel. Obviously, we could not be too far from the river because we were in a fishing camp. At worst we were in a *molibo* extending from the Bai river, perhaps only a short distance. During the dry season

the area would certainly not be inundated the way it was now. Justin marked off the general direction of the Bai river and we returned to the hut with little, if any, confidence.

Somebody's prayers must have worked because, to our cautious relief, a stranger in a small dugout was approaching in the distance. We waved excitedly, gesticulating and shouting. Scrutiny through binoculars revealed a tall Congolese poling his way, or rather pushing towards us. His dugout was very small and could not have had a draft of more than a few centimetres. It appeared he was well aware of us, having recognised us as strangers in this area long before we were aware of him. He arrived in due course, explaining that he had been fishing when he spotted our strange appearance. Introductions all around established who we were and who, hopefully, our benefactor was. He was Jerome Mankengi from the village of Kinami, which was our original destination—a fortuitous piece of good luck.

Jerome readily agreed to take us with him to the village of Kinami, informing us that the village was only a few kilometres upstream. There was more than one audible sigh of relief from members of our group. None of us relished spending the night lost in this seemingly unending sea of floating grass, although sleeping at the camp would have been much more comfortable than trying to pass the night in two dugouts.

What about Eduard and Pascal? We discussed the problem with Jerome, pointing out to him the general direction they had taken. He was of the opinion that we would intercept them en route to Kinami. We decided to chance it, but not without writing out detailed directions for Pascal and Eduard, just in case we missed them. These we posted conspicuously at the quay. After thoroughly bailing out our big dugout (it was taking in more and more water) we departed for Kinami with Jerome leading the way. At first it was hard-going, everyone taking a turn at the paddle-pushing. Because Pascal and Eduard had taken the second dugout Justin and Marie now rode with us. This overloaded the dugout more than ever, adding to our difficulties. In spite of this, the certainty of knowing where we were going gave us an extra measure

of zeal that made up for our fatigue. After about an hour we saw more open water ahead. Then, wonder of wonders, in the distance approaching the open channel, we sighted Pascal and Eduard. Within minutes we were reunited and Justin and Marie transferred to the smaller dugout again. The channel ahead was quite open, so we tried running our outboards, a decision strongly influenced by our weary muscles. Because the outboards could drive us much faster than Jerome could paddle we took him in tow and off we went, cutting the water with a vengeance.

As we drew abreast of a *molibo* about an hour later Justin pointed towards the east, saying "That has got to be Kinami". Indeed it was, although not very noticeable and easy to miss. Stopping our outboards we promptly cut Jerome loose. While a number of curious citizens of Kinami lined up along the shore Jerome brought us to safe harbour a few minutes later.

Outwardly at least, the people seemed inordinately friendly. I wondered whether the chief would be equally accommodating. Only later did we discover how unique our appearance really was to these Congolese villagers. Very few of the inhabitants had ever seen any white people. In fact, we were told by the elders of the village that in their entire history only one white person had visited the village: a French sanitary officer named Zobi who had conducted a malaria survey in 1963. After beaching our dugouts Jerome led us to the village centre, a clearing that resembled many other Congolese villages. The centre was circled by houses of stick-mud wall and thatched palm. The president (no longer called chief) of the village was just as friendly as the people. Introductions were made in the customary manner and chairs were brought for us so we could sit comfortably under a shady palm grove. The president, George Bokenga, his wife, Georgine, and the important men of the village all took a keen interest in our mission.

We sat in our chairs with the president facing us, much like Solomon in all his majesty. We described to them our experiences, discoveries, and previous expedition in some detail. The atmosphere and situation were reminiscent of what Count De Brazza, Livingstone, and Stanley must have encountered during their

nineteenth-century explorations of Africa. I remembered old prints of the first meetings between white explorers and Africans, and, indeed, those scenes were being replayed before our very eyes. We all felt the friendly tension of our hosts, most of whom had never seen anyone with white skin. In the background, wide-eyed youngsters stared at us with open curiosity, as though we were aliens from another planet—which, in a sense, we were. Just as Livingstone and Stanley, we had come in peace and friendship looking for a strange animal, and to push the Livingstone parallel one step farther, Gene Thomas was with us not only to interpret, but also to spread Christianity. I noted that the elders would first converse privately and then a spokesman would put another question to us—always, of course, with due respect and deference to the president (chief), who presided over this court as regally as had Queen Victoria over hers.

We spread out all our maps and charts and the villagers helped us correct our geographical data. We were given a list of 55 fishing camps on the Bai river, north to the village of Toukalaka. We corrected our mistaken belief that the upper Bai river was the Tebeke river. Actually, the Tebeke is a small lake not far from the Bai river, but we only learned this much later. Later we were told that the Tebeke was a tributary of the Ndoki river, extending eastward far to the north. According to this misinformation there was no connection to the Bai river. Further, it was impossible to use outboards anywhere in the Tebeke and we would have a very difficult time if we intended to traverse this river with dugouts. According to Marien, the river was close to Minganga, Marien's home village. It was from him that we had received most of the information that there were Mokele-mbembes in the Tebeke. Reliable as he was in other matters, we felt Marien's desire to visit his home village may have coloured his stories, thus explaining the incorrect information. Fortunately, we abandoned any attempt at the Tebeke river.

The president and elders stated that, as far as they knew, no one had recently seen a Mokele-mbembe in the lower part of the Bai river. Further, none of them had ever seen the creature although



28. The main channel of the Bai river at last.

they all knew quite well what it was. After more talk, some of the older men agreed to guide us upstream to particular molibos where Mokele-mbembes had been reported. We gathered that most of these alleged encounter sites were not in the main channel of the Bai river, but rather in the deep pools adjacent to the river.

As there was only one more village, Mougouma Bai, upstream from Kinami, we decided to accept President Bokenga's invitation to set up our base camp at his village. The centre of the village was on high ground and not subject to flooding, an important consideration during the rainy season. The work of preparing a semi-permanent camp site began in earnest. While some of the others were pitching tents, Pascal, with the help of Georges and Celestin, raised a 6-metre pole cut from a small sapling and tied it upright with plastic guy ropes. At the top of the pole the radio antenna pointed skyward and roughly south toward Brazzaville. Fortunately, our supply of alkaline D batteries was at least 1,000 per cent redundant, so we were able to maintain radio contact with

Brazzaville, in spite of the fact that the military batteries brought by Pascal were completely exhausted. After about half an hour of effort, Pascal reported to me that successful contact had been made with Brazzaville and that all was well. The minister of Water and Forests would inform the American embassy that we had safely reached Kinami and were setting up our base camp there.

The camp was so arranged that our gear, specimen bottles, and supplies were all neatly stowed centrally, with individual tents forming a circle around the equipment. As Gene and I were to share a tent we worked together and had our gear and tent secured in record time. Gene and I were compatible tentmates. We both liked to orient a tent so as to pick up any cooling breeze through the screen flaps; both of us were also fairly compulsive about knowing where and how we had arranged our personal belongings.

Georges and Celestin preferred to pitch their tents somewhat removed from our group, especially when we camped in villages. We suspected this tactic aided and abetted their extracurricular romantic activities. Justin was orderly both in the way he pitched his tent—stakes symmetrically aligned—and kept his equipment organised. Marie was a female version of Richard, always losing things or at least mislaying them. Marcellin had very definite opinions as to how one should behave and what one should wear. His individualistic idiosyncracies seemed odd to us—especially his attachment to a pair of rubber boots that he insisted on wearing during most of the expedition. The boots, together with what is best described as a parka-like cap covering his throat, ears, and neck completed his odd, but unique, jungle attire.

The only drawback to Gene's and my tent alignment was that this was also the orientation from which one might expect the incredibly sudden, driving, African tropical storms, which could soak everything in minutes. A prime consideration, overriding everything else, was that the smallest possible tent surface area should be exposed broadside to storms. If not, no matter how well staked down, the tent would quickly be torn loose, with only its occupants to keep it from becoming airborne. I remembered well how James Powell had fared during our previous expedition when

we were camped on a sandbar in the Ubangi river. Now unloaded, our big dugout rode higher in the water and leaked less, in spite of the fact that outboard motor vibrations had produced additional leakage in the stern. While we had been making camp word spread like wildfire among the villagers that, aside from our search for the Mokele-mbembe, we were also collecting specimens of plants and animals. A variety of villagers began to appear with odd assortments of specimens, including gorilla skulls, antelope horns, turtle shells, crocodile skulls, and an assortment of miscellaneous bones from a variety of animals. A live water python, inadvertently trapped in a fish net, was carefully extracted for our collection by Richard. I suggested we set the animal free because it was a known species and not particularly rare. Gene, however, vetoed the idea, saying that such an action would be misinterpreted by the villagers, especially as it was their policy to kill all snakes when encountered, both poisonous and non-poisonous varieties. We were also invited to buy artifacts such as spears, grass skirts, decorated aprons, musical instruments, and food. We filled our larder to overflowing with purchases of fresh eggs, avocados, oranges, bananas, and two excellent haunches of a medium-sized sitatunga antelope.

Soon after our arrival, the president informed us (through Gene) that we were to be the guests of honour at his house for the evening meal. In gratitude we opened seven quart bottles of beer for the meal and these were complimented by excellent palm wine from the president's stock. Under the supervision of the president's wife the food had been excellently prepared, including some of our antelope, an exceptional treat. A friendly, festive atmosphere reigned throughout the meal, reinforcing the rightness of our decision to make Kinami our base camp. Although our supply of safe drinking water was running low it was adequate for the evening. The next morning, before doing anything else, we boiled an adequate supply, adding Halazone tablets as the water cooled. In addition to our six 4-litre (1-gallon) canteens we had brought some 6-litre (1.5-gallon) water containers, allowing us to prepare several days' supply of water at one time.



29. First meeting between the Chief of Kinami and expedition leader, Dr. Roy P. Mackal.

After dinner we were informed that the young people of the village would like to perform and entertain us. Night had fallen by now and the dancing and singing was to be staged by the light of a campfire and the glow of our electric torches. With their pungent smell of burning wood, the campfires created a benign and cheery atmosphere very much in contrast to the dangerous jungle surrounding us. Another boon was the pleasantly cool weather and the fact that we were not harassed much by mosquitoes. Gene sat next to the president, chatting and occasionally translating an interesting comment. The president informed Gene that at the moment of our arrival one of the regularly scheduled meetings with the elders of the village was about to begin, but that it had been postponed until the following day in order that our mission and ourselves could be discussed. The president reassured us that the council of elders would most certainly react favourably towards us and our investigation.

Georges and Richard sat next to me, carrying on their usual game of one-upmanship. Georges teased Richard mercilessly about anything and everything he could think of that might make Richard look foolish. Richard, however, had a formidable ally—Georges' fear of snakes. Earlier, Richard had caught a small, harmless python and he noted how Georges would back off in fear. Over the days Richard would very cleverly take advantage of this fear of snakes by approaching Georges with his empty hand behind his back, as if trying to hide something. Georges invariably backed off, sometimes at a fast pace. Richard always played this trick when Georges was engaged in provocative conversation with village girls, to whom he liked to show off his uniform.

The young people of the village had assembled before us. They were supervised by an elder Congolese who made a brief speech of welcome on behalf of the village and the young people in particular. He stated that they would sing and dance in honour of our visit. Three drums were placed centrally; these drums were elongated, each about 1 metre high (3 feet), with a slender body and animal hide stretched across the rim. Three drummers began a repetitious rhythm with a wistful, lilting quality hard to define.

Alternating, the village boys and girls danced in a rotating circle around the drummers. They sang lovely little songs, repeating each set of words over and over again. The words of the song were “My beautiful girl friend, my beautiful boy friend, I want to marry you”. Gradually, the tempo increased as more of the villagers, including some adults, joined in the dancing. Justin, Georges, and Marie made a real hit with the youngsters as they, too, began to sway and dance. By 11:00 p.m., Gene and I were barely able to stay awake enough to enjoy the festivities. The president assured us it would be perfectly proper if we turned in for the night because there was no telling how long the youngsters would continue. Gene and I crawled into our pup tent and were asleep within five minutes, in spite of the din of the celebration which continued into the wee hours of the morning.

12

Exploration at Kinami

The next day, after a hearty breakfast prepared by the pygmies from the abundant and excellent fruits, vegetables, and meat available in the village, our explorations began in earnest. The first item on the agenda was a visit to Mougouma Bai, the last village on the Bai River. Because it was quite remote, it was possible we could come closer to hot, first-hand evidence of the Mokele-mbembe. With one of the Kinami villagers to guide us, our large dugout easily threaded its way through the floating grass upstream. After about an hour we saw on our right bank evidence of a small village. Disembarking from our dugout we were met by only a handful of Africans as we climbed up the riverbank. The village of Mougouma Bai was smaller than Kinami and looked rather ragged, as though hastily thrown together. Houses were not arranged in an orderly array; rather they seemed to have sprouted like seeds randomly dispersed by a breeze.

We were escorted to a small hut where we explained who we were. Marcellin acted as our spokesman and arranged a meeting with the chief and elders—or so he thought. While we waited patiently for the chief or someone in authority to appear, we continued our friendly exchange with the five or six Congolese attending to us. After an hour of this more or less idle chit-chat, neither the chief nor anyone remotely resembling an elder had appeared. Marcellin and Georges told us that they sensed unease among the Africans chatting with us. Georges reiterated to them that our search was being carried out under the auspices of the Congolese government, hoping that a reminder of this authority might not be lost on our new acquaintances. We noticed that, periodically during our conversation, one or two of the Africans would slip away, only to be replaced by still other individuals. It finally dawned on us that we

were being interrogated by someone unknown to us via these comings and goings. For some unknown reason the headman did not want to meet us face-to-face. In due course an African who had left us only ten minutes earlier returned, stating that he brought from the chief the following message, which consisted of two sentences, no more, no less. First, we have heard of the Mokele-mbembe from our fathers; second, we never saw it and don't know where it is.

I was astonished. Here we were, only a few kilometres from Lake Tele, where a Mokele-mbembe had been killed, yet these villagers claimed to know nothing about it. Through Gene and Marcellin as interpreters I responded, demonstrating our rather extensive knowledge of the episode at Lake Tele, including descriptions of the appearance and habits of the animal, what it ate, where it had been seen and by whom. When confronted with such a barrage of information, they were visibly disturbed, and some, in their confusion, admitted to a great deal more knowledge than the chief's message had intended to convey. It became clear that the people of MOUNGOUNMA BAI were hiding information and knew a great deal about the Mokele-mbembe but were not going to share it with us. Georges suggested serving up a few bottles of beer, hoping that the beer might loosen their tongues; and because the villagers' comings and goings had not ceased, we were sure that everything that transpired was being reported to the chief.

Georges made an impassioned plea for cooperation, first conciliatory and then threatening. Still the chief would not see us, but some of the villagers now began to speak a little more openly. One told us he had heard that a Mokele-mbembe had been at Lake Tele at one time, but he did not know if there were any there now or whether there were any in the Bai River. He also said his great-grandfather had definitely seen the animal and that it was supposed to swallow children.

Gaston Dama, a Red Cross medic assigned to the village by the Congolese government, was more cooperative. Dama, not a native of this village, did not seem bound by the dictates of the chief and the elders. He told us he had been busy treating sick Africans when



30. Early morning sick call. Fungus infections of the skin were widespread.

we arrived and that he had only just now finished with his sick call. He confirmed that, for their own inscrutable reasons, the villagers were not inclined to cooperate with us. In talking with him we learned of his problems in trying to treat illness in the jungle, almost entirely without the help of modern medications. He showed us a horrendous case of foot fungus, the foot so misshapen by unchecked pathology that individual toes were hardly recognisable. In another case, we were shown a large cancerous tumour that was like something out of a horror movie. I suggested that the poor man be sent downriver to Brazzaville for treatment and relief from his suffering. We also left a large quantity of medical supplies with Dama. Although his gratitude was profound, the mood of the other villagers still did not soften. We realised how fortunate we had been to discover the friendly villagers of Kinami. Grimly, I remarked to Gene that these people did not deserve our

medical largess. He took the view that we should not blame the sick people of the village for the uncooperative attitude of the chief and elders.

I was still not convinced, but the unannounced arrival of a comic character, a travelling musician, struck a lighter note, propelling me out of my nasty mood. He appeared to belong to no particular group, travelling from village to village and literally singing for his supper. Part of his comic air resulted from the fact that he was slightly mad, which some Africans regard as funny. Obviously hoping to receive enough reward to buy his next meal, he played peculiar tunes on a small instrument resembling a Jew's harp. Even when no one was paying him any attention the man continued to posture and perform. He talked and gestured to a non-existent audience, playing the role of court jester.

By noon it was clear that our visit to Mougouma Bai was a disaster. Finally we gave up trying to gather information from the villagers and began the rather tedious task of measuring river depths and looking for any large moving objects under water. Our new guide from Kinami had been selected because he was supposed to know the exact locations where Mokele-mbembes had been reported previously by others, although he did not claim to have seen a Mokele-mbembe himself. During the soundings our sonar equipment worked flawlessly, which was about the only plus for the day. Fish were clearly delineated, as was the river bottom. In most areas the river bottom was an average of 6 metres (20 feet) below the surface of the water. The next layer consisted of 4.5 metres (15 feet) of a thick layer of organic mud, and then about 7 metres (27 feet) of unconsolidated clays and silt. Only below a depth of 17 to 18 metres (56 to 58 feet) was there solid subsoil. Our guide took us to a variety of relatively deep pools away from the mainstream of the river where we spent most of the afternoon probing their depths with our sonar equipment. Everyone was intensely interested in watching the sonar screen as objects appeared and disappeared. Abundant fish appeared on the screen, some quite large individuals as well as schools. Occasionally we intercepted coherent targets larger than 2 metres (2 yards) in



31. Sonar screen lights up as power is applied, indicating a fully operational unit ready to plot river depths, delineate river bottom layers and indicate any large objects moving in rivers or pools.

length. We considered these too large to be fish (except for lungfish and large catfish) because most very large fish specimens have only been reported from the Ubangi, not small rivers like the Bai. There were catfish in the river but they were small ones like those Georges had purchased from local fishermen for our evening meal. Thus, any target larger than 3 metres (10 feet) must certainly be a crocodile. Once we pinpointed a slowly moving, elongated object about 5 metres (17 feet) in length. It appeared to be a large example of the Nile crocodile but it did not surface during our short survey of its pool. Having located no Mokele-mbembe we headed back downstream toward Kinami late that afternoon. We were disappointed by the fact that no new clues had been picked up by our search as well as by the uncooperative attitude of the MOUNGOUNA Bai villagers.

Upon our return to Kinami our spirits lifted when we found our clothing newly washed, neatly stacked, and dry. The pygmies had washed the clothes and managed to dry them despite a brief shower in the middle of the afternoon. The pygmies' method of drying clothes is ingenious. After wringing most of the water out by hand they spread the garments out on the stiff grass growing in little open areas under the jungle canopy. These little dells are beautiful. As sunlight filters through the canopy it catches the sparkling colours of the abundant butterflies that congregate in these areas. Because direct sunlight touches the jungle floor in these dells it will dry and sterilise any item laid out in them.

Over supper our conversation focused entirely on the behaviour of the people of MOUNGOUNA Bai. The president of Kinami was very frank, stating that we should not take any negative information from the MOUNGOUNA Bai villagers at face value. Marcellin, Georges, and Celestin had had private conversations with some of the more friendly villagers who had accidentally or intentionally let it slip that the people of MOUNGOUNA Bai were hiding information about the Mokele-mbembe. Later we discovered that even in our friendly village of Kinami there was a faction strongly opposed to divulging information about the locations of Mokele-mbembe. Information was leaked to us by certain Kinami villagers who had

become friendly with the African members of our expedition. The president (chief) himself gradually developed trust in Gene and confirmed that there was opposition to providing information about the Mokele-mbembe. Once we were aware of the delicate situation it was agreed to downplay the Mokele-mbembe aspect and emphasise an interest in gorillas. The strategy was to send out an expedition to look for gorillas while, at the same time, another group would explore the Bai River at Mokele-mbembe encounter sites. We met in secret with the president and trusted informants who now, in contradiction of the earlier pose, told us that the Mokele-mbembe had been seen in the lower Bai River. In fact, one had been observed in a deep hole estimated to be 4 to 5 kilometres (2½ to 3 miles) upstream from MOUNGOUNMA BAI.

Our plan was to depart for this site at 5:15 a.m., even before the first light at 6:00 a.m., so as to slip by MOUNGOUNMA BAI without being noticed. Meanwhile, Richard, Marie, Marcellin, and Georges would make an overland excursion to explore the jungle in a general northeasterly direction. The plan for them was to search through the swamp for half a day and then return. Besides the Mokele-mbembe they were also to be on the lookout for lowland gorillas, whose presence had been widely reported by most of our informants throughout the area. Gene and I, with trusted and knowledgeable Africans from Kinami, would make the river excursion.

Before dawn the next morning we departed in a conspiratorial and adventurous spirit, leaving the rest of the expedition to make the gorilla trek. Although we found sufficient open water to use our outboard we decided not to avail ourselves of this luxury until we were well upstream from MOUNGOUNMA BAI. Because the noise of an outboard would certainly attract attention, we paddled instead. Under cover of darkness, we passed MOUNGOUNMA BAI without incident, as our paddling was virtually silent.

By mid-day we were near the deep hole said to be the “stomping ground” of a Mokele-mbembe. In order to reach this area we often had to resort to paddles, even when security was not a consideration, because of intermittent patches of floating grass. At last, near

Mahonge (a temporary fishing camp), we moved through a molibo into a deep pool, allegedly the habitat of “the creature”. I got my sonar transducer into the water, breathing a sigh of relief as the screen lit up and the slow auto-scan of the depths began. The pool was about 6 metres (20 feet) deep, not much more than the main channel of the Bai, which measured about 4.6 metres (15 feet) deep. With bated breath we all crowded around the screen, watching the regular appearance of fish, both in small schools and as single larger individuals.

We began probing the roughly circular pool systematically, gently paddling the dugout in circles of ever-decreasing radii. Suddenly,



32. The search for evidence of the *Mokele-mbembe* was never easy. The swamps were penetrable, but never dry.

on the second arc, our screen showed an elongated, slowly moving object about 1 metre (1 yard) from the bottom. The horizontal scale indicated a length of about 6 metres. My pulse raced. Could this be a Mokele-mbembe? Certainly the size was right—between 4.5 metres (15 feet) and 9 metres (30 feet). On the other hand, a really large Nile crocodile would also fit the bill, although this length was at the very largest limit of accepted size. I watched the object anxiously, hoping to see the forward portion (as determined by its direction of motion) bend in a large arc which would mean a long, thin, flexible neck rather than the much shorter crocodile head-neck. The bending of the tail of the creature would be equally possible for both Mokele-mbembe and crocodile, so we paid less attention to the part of the screen showing the rear of the creature. We observed the animal for a full 20 minutes and during this time the front part of the creature never did flex very much. Because we were watching the screen so intensely, we failed to notice that the creature was moving into that part of the pool that connected to the Bai River through the molibo. Our paddling, although minimal, apparently was disturbing the animal and/or the sonar signal was being sensed. It is impossible to say which because we do not know what sensitivity, if any, crocodiles or Mokele-mbembes might have to sonic energy. In any case the creature must have moved into the river because we lost contact; and sonar scan of the molibo and short distances upstream and downstream yielded no further evidence of it. If it had remained in the pool for a longer time I had in mind to stake off the rather narrow outlet (about 3 metres, or 10 feet) thus blocking its exit. On balance, I felt compelled to identify this creature tentatively as a very large Nile crocodile. This identification is not positive, of course, especially because we do not know how a Mokele-mbembe moves its head and neck under water. Nor did we have the opportunity to observe the creature take air, an obvious necessity sooner or later for an air-breathing animal. Although the idea of going overboard to investigate was mentioned while the target was on the sonar screen, no one volunteered. In any case I would not have

permitted the risk of a possibly fatal encounter with either a Mokele-mbembe or a large Nile crocodile.

Late in the afternoon we paddled downstream toward Kinami, checking out three more molibos on the way, none of which showed any occupants comparable in size to the previous creature. Arriving at dusk everyone was ready for supper and a good night's rest.

While we were occupied searching the river depths Richard was hoping to spend some time observing and filming lowland gorillas. The whole gorilla question had become rather amusing because our African colleagues, particularly Georges (aided and abetted by Gene), were trying to frighten Richard with terrifying stories of gorilla attacks. Richard, who is more than a little informed about primates, knew quite well that one has nothing to fear from gorillas if they are treated cautiously and with respect and he insisted that firearms be used only in the most extreme circumstances.

Lowland gorillas, which are harder to study than the more easily observed highland gorillas of Zaire, are not supposed to be found east of the Sanga river. We discovered during our first expedition that lowland gorillas are well distributed throughout the Likouala region, from Sanga to the Ubangi, and probably into western Zaire as well. Unfortunately, villagers kill gorillas when they encounter them. Although they still seem plentiful, we really have no idea as to what extent they represent an endangered species in this area.

The "gorilla party" set out at about 6:00 a.m. on November 24, taking a dugout to Mougouma Bai where two local guides joined the party. Accompanying Richard were Marcellin, Marie, Marien, and Georges who took along his AK-47 submachine-gun. Travelling northeast from Mougouma Bai, the group crossed large stretches of elevated savanna, intermingled with swamp forest in which transit was only possible by wading through mud and water that was knee- and sometimes waist-deep. Although members of the party walked holding their equipment up in the air, both Richard and Marie had a hard time keeping their cameras, especially the lenses, dry.

The “gorilla party” had to cross through both savannah and swamp forest, but it found that the savannahs were at times not much drier than the swamps, especially when a thunderstorm came and went with its usual rapidity. The animal trails they were following became muddy gorges. Wild buffalo tracks were found, although no buffaloes were observed. (In all Africa these are the animals most dangerous to humans.) Large tracks made by bigger animals, probably elephants, were also seen. After an exhausting non-stop trek of five hours the group arrived at the “great forest” where the gorillas live (although individual gorillas can be encountered almost anywhere in the region). Richard noted that the kind of vegetation found in the forest was appropriate for gorillas and quiet forays were made to find signs of the hairy giants. There were definitely signs of gorillas in the area, but with the noise made by such a large group the wary creatures always kept well ahead and out of sight.

By early afternoon, Georges announced they would have to begin their return trek. Frustrated, Richard and Marie had to give up hope of seeing any lowland gorillas in their natural habitat and prepared themselves for the gruelling return to Kinami. Back they went across the savanna, back through the swamps, more savanna, and then more swamp, until they lost count of the transitions. As the sun began to drop toward the horizon, the Africans became increasingly anxious and began moving faster and faster, particularly Marien. Under no circumstances would they spend the night in the savanna, even if it meant leaving Richard and Marie behind—which they did twice. The Africans, especially the pygmies, avoid camping overnight in the open savanna because of the lack of cover for they feel that the jungle canopy provides protection against storms and dangerous animals. The reasons behind this idea were never made clear to us. Certainly the canopy offers protection against storms yet it seemed to us there were at least as many dangerous animals in the jungle as in the savanna. Richard now says he remembers few of the details, perhaps because of fatigue, but he does remember stopping, exhausted and covered

with mud, at MOUNGOUNMA BAI before the sun set. The Likouala had baptised him and Marie as no other place on earth could.

The next day Richard found that he still had the spare AK-47 cartridge clip in his bag that Georges had asked him to keep for a while. He had lugged the clip, which weighed at least 500 grams (1 pound), all the way back without realising it. This extra weight no doubt contributed to Richard's fatigue. The degree of his blackout was underscored when, upon checking the maps later, Richard was unable to determine the exact location of the place where they had been, or precisely where the "great forest of the gorillas" was situated.

The Mokele-mbembe, too, remained elusive.

Because all our investigations had yielded negative or uncertain results a reassessment of our plans was in order. One of our major concerns was our gasoline supply which was running low; and so, unless a very positive report from the upper Bai should be received, we decided to return to Dzeke for exploration of the surrounding area. Going to Dzeke would not use up precious fuel in a direction opposite to our return route as would be the case if we went farther upstream on the Bai. We were told of a short cut to Edzama, just downstream from Dzeke, on the Likouala-aux-Herbes; but after careful deliberation, the president advised us that the size of our large dugout made this route impractical. Instead, he provided a guide to take us back to the confluence of the Bai and Likouala-aux-Herbes rivers.

That night a torrential rain soaked our camp but our tents and tarps kept both us and our equipment fairly dry. In the morning a bright sun greeted us, soon drying our soggy belongings and dispelling our clouded dispositions. I held an extensive sick call for 60 to 70 villagers. A large supply of aspirin, antibiotics, penicillin and erythromycin, anti-fungal, anti-inflammatory, and anti-bacterial ointments and sprays were also left for future medical needs. I gave the president a crash course in first aid, with simple directions for the use of the medical supplies.

The villagers appeared to be genuinely disappointed at the prospect of our imminent departure and we promised to return one

day in the future. Speeches of thanks and goodwill were made and photographs were taken by Richard, Justin, and Marie. As soon as our dugouts were loaded we departed from Kinami with a reluctant sadness. A real bond of friendship had been forged with the villagers during our short stay; and they sent us off with lavish gifts of plantain, chicken, pineapples, oranges, and fish. Waving and cheering, Kinami men, women, and children lined the riverbank to bid us farewell.

13

The Tracks at Dzeke

Because of the expertise of our Kinami guide we reached the Likouala-aux-Herbes in half a day. Once again, we were all astonished by our native guide's ability to pick the correct way through the vast sea of floating grass near the confluence of the Bai and Likouala-aux-Herbes rivers. He seemed to know exactly which direction to take, even though, to our untrained eyes, we seemed to be heading hopelessly into a morass. The big dugout proved to be a problem on more than one occasion, but judicious chopping with machetes got us through and under low-hanging tree branches and underbush. We tried our outboards whenever we found open water, but more than half of the trip still required a great deal of paddling, pushing, pulling and tugging.

After reaching the Likouala-aux-Herbes, we proceeded upstream immediately because our outboards could now be run without problems. Because Gene had been steering and running the outboard during most of the expedition his arm and shoulder were sorely in need of a rest. To give him a much-needed break I took over for a while. Pascal, Eduard, Marie, and Justin in the smaller dugout ran on ahead, with instructions to rendezvous at Bete Tolo. With outboard motors at full throttle we arrived there in two hours.

As soon as we sighted the lonely dwelling at Bete Tolo, my feeling of strange awe was even more intense than during our previous visit. I found this feeling inexplicable. Our inquiries about the place had turned up two explanations for the mystery of the abandoned house. In one story it was said that Bete Tolo had been built by a retired Congolese army officer during World War II. He was supposed to have died, but his ghost haunted Bete Tolo; ergo, no one would disturb or approach the place. The other version was



33. The sign identifying the abandoned brick house in the swamp as “BETE-TOLO”.

slightly different, alleging that the owner was still alive, but completely mad and given to roaming about, occasionally showing himself in the neighbouring villages. We were not able to establish to what extent either story might be based on fact.

Because the others seemed to share my strange fascination with the place we decided to thoroughly explore the area, beginning by having our dinner on the front porch. Justin, Marie, and Richard took a lot of photographs in and about the house. Justin and I found that behind it, stretching to the north, was a grassy open savanna. We trekked several hundred metres into the open area so as to get a better view. As I turned to look at the house from behind, I was struck forcefully by the memory of having seen it before. In a series of persistent, recurring dreams over a four- to five-year period prior to my even considering going to Africa, I had dreamed of this place in all its exact physical details at least

a dozen times. In the dream I find myself standing in a grassy, sunlit African savanna, looking at a house that perplexes me because it is built of brick and finished with windows, glass, and doors—a house such as you might find anywhere in the United States, England, or Europe. The heat is intense, with heat waves visibly rising, mildly distorting my view. For some reason I wrench my eyes away from the enigmatic house and turn, only to find that a large bull elephant with prominent tusks is almost upon me in a silent, but deadly charge. I pivot in panic and run for the house, the elephant hard on my heels. I hurtle through the half-open door, virtually falling into the house. I expect to hear the crash of the elephant slamming into the doorway; he is so close behind me, his momentum must certainly carry him into the doorway, obviously too small for such a creature to pass. No crash! As I look up through the doorway the elephant has vanished. Instead, a tranquil, sunlit savanna stretches away to the forest. I note a curious effect: as I shift my head relative to the door, the scene outside distorts grossly, twisting relationships out of proportion. I consciously attribute this effect to a tremendous disparity in moving air densities through which I am looking. I rise from the floor, surveying the interior of the house, which is modestly furnished with western-style wooden table, chairs, and a bench. An aura of abandonment intrudes strongly into my consciousness. For example, several glasses and a decanter are on the table, in such disarray as to suggest they had been left behind hurriedly. A half-played game, involving markers similar to dominoes, is conspicuous in the centre of the table. The reality of the dream is exceptional, including its being in full colour. I note a marble stairwell leading to halls below ground level. Automatically I move forward, taking a step down into the lower level. At that moment the scene in the lower level is clearly visible, although mildly distorted, twisting and shimmering like some topological nightmare. I see red-marbled corridors, several arches, columns and pilasters, vaguely classical Greco-Roman in design. As I descend, waves of vertigo rise from the pit of my stomach. Relationships shift and change before my eyes; a diffuse light, its source unknown, seems to

illuminate the entire scene. No shadows or dark corners are apparent, in spite of the complexity of doorways, rooms, and corridors. A vast underground array of structures extends to who knows how far. As I leave the stair and move toward the nearest corridor, suddenly I'm wide awake.

There was never any evidence of tachycardia, or nightmare-like physiological changes associated with the dream. It was identical in all details, and occurred again and again during the years prior to my travels in Africa. But I had not recollected or connected them to either of the expeditions until this very moment. When I first saw Bete Tolo, it was from the river and so I did not connect it with my recurrent dream in which the view was from the savanna.

I felt all this to be a very private matter, so I said nothing to any of my companions, despite the intensity and strangeness of the experience. Up to the moment of this writing I fail to understand what significance, if any, these dreams and the serendipitous discovery of Bete Tolo might have for me. Perhaps it is a case of precognition, if such is possible. Whatever the answer, it does seem strained to write the whole thing off as coincidence. During the exploration of the interior of Bete Tolo, no evidence of a cellar of any kind was found; nor were elephants observed anywhere in the area. However, the interrupted game of 'dominoes', the overturned wineglasses and decanter were found exactly as in the dream.

After spending several hours at the place, we pushed upstream towards the village of Dzeke, where we hoped to get closer to the Mokele-mbembe mystery. The trip was uneventful, everyone quiet and absorbed in his or her own private thoughts about the mystery of Bete Tolo. Dzeke was located about four hours by outboard upstream from Bete Tolo and we arrived just as the African night was fast descending.

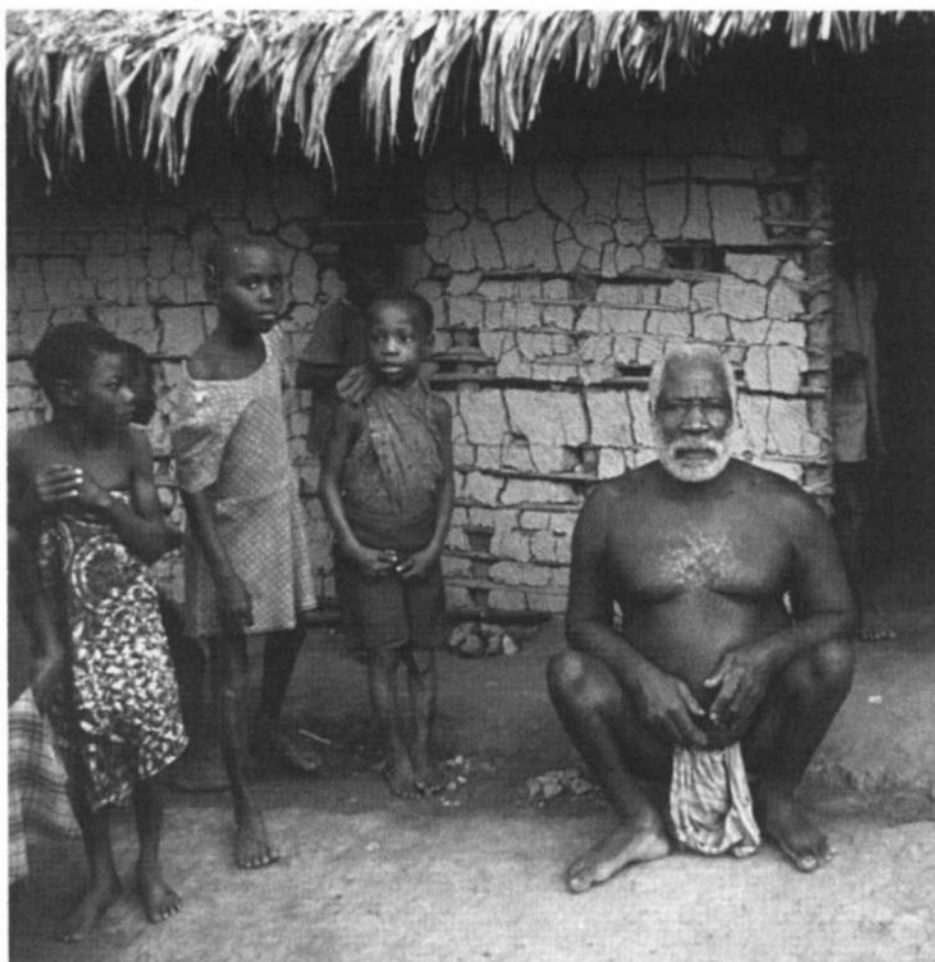
The welcome given us at Dzeke broke our contemplative mood. While we made camp in and about an unused native house the villagers filled us in on the news. The raiding leopard had been wounded but not killed. Village dogs were no longer disappearing,

nor were there any further signs of nocturnal leopard visits. Apparently, the creature had decided to leave the village in peace after being severely wounded, as established by its bloody trail. Perhaps it had died from its wounds somewhere out in the bush. More interesting to us was our realisation that, during our absence, more information about the Mokele-mbembe had surfaced, particularly the location of encounter sites nearby. Although we were all tired and ready for bed after the evening meal, presided over by Georges and the pygmies, we continued our discussion until a late hour with our two best informants, Paul Mosokelo and Emmanuel MOUNGOMELA, both hunters. Neither claimed to have ever seen the Mokele-mbembe, but they had collected a lot of information. They reported the presence at some time of Mokele-mbembe at Mbondo, a short distance downstream from Pikunda, on the Sanga River. This story was identical to the Freiherr von Stein zu Lausnitz report—obviously the same event. Because the local region where the event allegedly took place was much too distant for us to investigate at this time, another report of an area between Mosongo and Bounila at a curve in the Likouala-aux-Herbes called Mokongou interested us more. We quickly learned that this account was also a replay of an earlier story related to us. The reference to the destruction of a sandbar in the report suggested that this information was probably already in our possession. The only added information of value was that the Mokele-mbembe ate not only malombo fruit, but also the leaves of a plant called “Mabondzi”, which also bears edible fruits. As far as we could determine, it was another species of *Landolphia*, closely related to the malombo. The unanswered question in my mind was whether the other unknown animal with a large, single horn was again being mixed into the pot. Although these two secondhand reports were old hat, they were important for us as a basis for judging how much variation was introduced by retelling. Our conclusion was that the stories from different sources were very consistent—indeed, much more than one might have imagined.

The hunters also provided totally new, if secondhand, reports. They stated that a Mokele-mbembe had been seen upstream near a place or village called Ipongi. This location was less than a kilometre from where we had had our own encounter with an unknown animal. Everyone questioned about Mokele-mbembe agreed that there were or had been such creatures at Lake Tele and also at the confluence of the Likouala-aux-Herbes and Sanga rivers at a place called Bozenzo. At Bozenzo the creature was reported to stretch its long head-neck out of the water and kill or eat goats. This last bit of information was inconsistent with our understanding that both the Mokele-mbembe and the Emela-ntouka were strictly vegetarian. Our informants were not at all sure about the eating, but the killing of the goats was definite. The villagers at Bozenzo had become enraged at the goat killing: three men screwed up their courage, attached rope to spear shafts, and successfully speared the animal. It was subsequently cut up and eaten. Following this event, misfortune descended upon the village, including houses burning down without obvious cause, unusual illness, and death. As a result the animal became an object of veneration. Attempts to fix the date for this event produced the usual inconsistency. The best estimate we could make was around 1908-09, at least before 1910, perhaps as far back as 1880. One informant set the date as recently as 1930.

Most of our informants agreed that the best time to look for the Mokele-mbembe was February to June. The idea was that during high water the creatures had no difficulty moving about without exposing themselves as water was everywhere. On the other hand, during the dry season, low water made them go to specific places: deeper holes where they could remain out of sight.

We turned in for the night reluctantly with our heads full of plans for the morrow. We intended to visit the most recent Mokele-mbembe encounter site reported to us, only a short distance upstream from Dzeke, do some specimen collecting, and make sonar probes of two or three sites on the river where a Mokele-mbembe had been seen in the past. The next morning, with the great hunter Emmanuel MOUNGOUNMELA as our guide, we went



34. Ancient Congolese, paralyzed from the waist down. This informant told us much about the *Mokele-mbembe*.

upstream by dugout a few hundred metres and then pulled up onto a grassy shore. Our purpose was to examine the alleged encounter site described by MOUNGOUNELA. The riverbank was fairly firm and with no canopy above us (the canopy began in earnest about 50 metres inland). We had to walk with extreme caution, looking carefully at the ground before taking the next step to avoid possible encounters with a “River jack,” whose bite could well be fatal. Despite the care we took, every now and then one of us would sink into the mire, calf-high. Fortunately, these boobytrap-like low spots alternated with higher ground. The jungle had become dense, making progress difficult, and then, suddenly, we found ourselves at the edge of an open area containing several small pools (none more than a few dozen metres in diameter), and the sight

was primeval in its stunning beauty. The forest's edge displayed a panorama of great palms, climbing lianas, some with stems thicker than a man's thigh. Malombo grew everywhere, as did the mabondzi, which was indeed a variety of *Landolphia* or a closely related species. The malombo fruit was still immature, yellowish-green, and about the size of an orange, about 2 to 5 centimetres (1 to 2 inches) in diameter. Emmanuel plucked some of the larger yellow fruits and bit into one, sucking on the pulp. I tasted one of the fruits and found it pleasant. It had a kind of acrid sweet taste, unlike anything else I had ever eaten. Perhaps when fully ripe the acrid flavour would mellow. We stopped, gazing with rapt wonder at this scene, little changed through the corridors of time. In such an environment the possibility of living dinosaurs did not seem so strange.

Emmanuel led us a short distance, perhaps ten metres along the northeastern edge of the pool, and there before us was a clear break through the underbrush. Branches, broken and weathered, attested to the passage of some creature 1.5 to 2 metres in height



35. Trail of broken branches and underbrush allegedly made by a *Mokele-mbembe*.

and half as wide. This was certainly the right size for a Mokele-mbembe, but, of course, also for a smallish forest elephant. All the while both Justin and Richard photographed everything in sight. At first the track through the jungle was not hard to follow as it led towards the river. The ground was high there, covered with fallen brown leaves, and in the track were broken twigs and branches. Emmanuel pointed out alternating depressions, evenly spaced, about the size of a dinner plate, 20 to 25 centimetres (12 inches) in diameter. According to Emmanuel, the spacing was about right for a small elephant and he indicated that, upon first finding the tracks and the break through the jungle, he thought a water-loving elephant must be responsible for the trail. He told us that the animal must have vacated the pool only minutes before he arrived, because he noted water droplets on some of the foliage at the edge of the pool a metre or more above the ground. Woodcutters from Dzeke had been in the vicinity making a great deal of noise cutting wood with machetes. They would not, however, approach the Mokele-mbembe pool very closely, nor would the citizens of Dzeke even now, more than a year later, venture near to the area. Obviously this accounted for the fact that nothing had been disturbed.

We followed the latter half of the trail rather easily to the river, where it disappeared into the metre-high grass along the river bank. Emmanuel again described how the footprints had led straight through the grass which was flattened to a distance of about a metre on either side of the centre line of the trail. At that point he realised that no elephant leaves a trail such as that. I suggested that a large crocodile might flatten the grass in that manner. At that, Emmanuel became slightly indignant and stated, "Even you, *mondele* (white man), could tell the difference between the imprint of a crocodile foot and these elephant-like tracks. Further, no crocodile breaks a passage through jungle undergrowth to a height of 1.5 to 2 metres. All elephants I have ever tracked into a river—and there have been many—always came out again. I checked both sides of the river upstream and downstream and nowhere were there signs of a large animal leav-



36. Alleged footprint of a *Mokele-mbembe*, immediately adjacent to Dr. Roy Mackal's right hand. Footprint depressions were filled with fallen leaves.

ing the river. No, mondele, that was no crocodile or elephant''. I had to agree with him, although we had to take his description of the flattened grass on faith, because, at this late date, the grass along the river was perfectly upright. Before we departed, we collected two additional species of malombo, as well as other botanical materials.

The next order of business was to check other alleged Mokele-mbembe encounter sites. At this point it seemed most probable that the Mokele-mbembe, and for that matter the Emela-ntouka, did not inhabit the river channel proper, but only used it as a cover to move to other areas. The reason most of the reports concerned observations in the river was that the native population is distributed mainly along rivers and streams rather than in the depths of the inhospitable and dangerous swamps. Thus, the geographical locations of encounters reported by human observers do not necessarily reflect the real distribution of the Mokele-mbembe.

The rest of the afternoon was spent checking out three river sites where the creature had been reported. My sonar device revealed an abundance of fish but, alas, no Mokele-mbembe. Our routine consisted of a quiet approach to the site, using our paddles rather than the outboard; a circling of the pool, or molibo, with decreasing radii; and a final stop in the middle of the site, usually over the deepest point in the pool.

Along the way, near the village of Ipongi, just north of Dzeke, Justin went ashore with a guide to explore and study the rare congruence between jungle, forested areas, and open savannah, which happened to exist in this particular region. At Ipongi we took on a cargo of delicious oranges and grapefruit, purchased from the villagers for 500 CFAs (\$ 1.66). Although the villagers did not want to be paid we insisted that they accept remuneration. Along the river money is just as important as in Brazzaville. The Ipongi villagers were particularly friendly to us because we held an extensive sick call. A long line of about eighty people formed, each patiently waiting his or her turn to describe complaints in Lingala to Gene, who would translate into English for me. I would dispense

the appropriate medication; and my instructions for treatment would conversely be translated into Lingala. Most of the problems were common enough: a variety of bacterial and fungal infections, arthritis, malaria, filaria, intestinal parasites, syphilis, gonorrhea, and among children, measles. The opportunity to alleviate the suffering and sickness among these friendly people gave everyone an emotional lift, yet underscored the great need for the kind of medical and hygienic aid that could only be provided through the cooperation of the more developed nations.

By late afternoon we had explored the river to our satisfaction, both north and south of Dzeke, without having detected any evidence of Mokele-mbembe. Returning to Dzeke, well before dusk, permitted us to arrange for a social evening with the friends we had made there. Unlike the people at Kinami, dancing and singing was not the order of the day. Rather we opened ten large bottles of beer and a good supply of *Kwanga* to go with the beer. While most of our expedition members enjoyed the social hour the pygmies prepared dinner. Marien had been hunting all day, bringing back two monkeys for our supper. Bruno Antoine, our educated informant, showed us the official village archives which consisted of a smooth portion of the wall of his house. On it were recorded in French various important historical events. With pride he showed us the latest entry: the date and purpose of the mission of Dr. Mackal. Contemplating the date of our visit, my thoughts returned to our first expedition over a year ago when we were at Epena. The irony of the situation was depressing because, as far as we know, the Mokele-mbembe in the Dzeke pool had been here alive and well at the time we were at Epena. If we had visited Dzeke at that time, according to our original plan, we would probably have been able to observe and possibly photograph this mystery animal. Fate had not been kind.

As the expedition members relaxed, discussing the day's activities and future plans, we were reminded of a variety of problems. With the end of the rainy season now fully upon us, the water levels through the area were dropping daily. That meant it might become impossible to get our dugouts back through the canal connecting



37. Pool where a *Mokele-mbembe* was reported prior to our arrival at the village of Dzeke.

the Tanga River with the Ubangi. Furthermore, our supply of gasoline was extremely low. If it gave out, it would mean days of back-breaking paddling of our dugouts upstream against the current to Epena, where our supply of gasoline could be replenished. From that point on, we would have to ration gasoline and restrict the use of outboards to the absolutely necessary trips only. After thoroughly discussing the situation with Gene I decided we had better return to Epena immediately. If we had been on a hot trail we could have gone up to Epena, purchased a fresh supply of gasoline and continued the search. At the very least, we would have had to abandon our large dugout because it would be impossible to navigate it through the canal until next year's rainy season. We retired early because, if we ran out of gasoline, the next day might find us paddling our dugouts upstream, requiring a great deal of physical exertion. As a parting gesture I offered our great

hunter, Emmanuel Mougoumela, a .458 Winchester rifle with a lifetime's supply of ammunition in return for a piece of a Mokelembembe. This offer, proffered in all seriousness, has as yet borne no fruit. I knew from conversation with Mougoumela and the loving care with which he "caressed" my .458 Winchester that this kind of incentive was the best way to get a piece of Mokelembembe tissue for analysis.

14

Homeward Bound

The villagers of Dzeke had grown fond of us, just as at Kinami. Between fond farewells and a sick call of more than 120 people we were not able to get underway till 9:25 a.m., an unusually late hour for my expedition. Even Richard, who didn't like to rise before noon, abided by the general rule of being up and about each day at first light. I was anxious to get to the village of Boha, located on the Likouala-aux-Herbes River about 6 kilometres (4 miles) upstream from Dzeke. From Boha one can trek to Lake Tele (about 40 kilometres or 25 miles) because there is a triangular-shaped spur of relatively high ground leading to the lake. We were interested in Boha, not because we intended to walk to the lake, but because the people allegedly knew a great deal about the *Mokele-mbembe*. With our outboards at full throttle the upstream run to Boha took only an hour. I ran the heavy outboard of the big dugout, steering fairly easily, in spite of the tendency of the current to move the dugout's bow to the left or right. Gene was thus able to give his exhausted arm and shoulder a well-deserved rest.

Our reception at Boha was cordial enough but, in spite of the outward friendliness, I felt a distinct tension, perhaps the result of mistrust or at least of guarded reserve. We asked to see and speak with the important elders named by Gilbert Bonguenele Manengue, but we were told that none of them, including the chief, was immediately available.

While we waited, our informant Samuel Maningi, told us a few things about Lake Tele. He confirmed that a spur of high ground extended from Boha to within 4 kilometres (2½ miles) of the lake. The distance to Boporte, the last campsite along the way, 3 kilometres (2 miles) from the lake, is 47 kilometres (30 miles). This is the site where the original village of Boha was located. The more

venerable villagers refer to Boporte as "Old Boha." The trail to this point is on high ground, dry except during the middle of the rainy season. Along this trail are four way-campsites, in order after leaving Boha: Dinsesse, Nkoussaka, Oubianynia, and Mpangnangai, which is the last camp before Boporte, or "Old Boha." At the southern tip of the lake some camp houses are located. According to our informants all the campsites, with the exception of the huts actually on the lake, remain above water throughout the rainy season. I asked Georges, who was acting as translator, to inquire about the superstitions attributed to the lake, such as photographic negatives always blurring, flashlight batteries going dead, and so on. To our satisfaction, Maningi stated in a very matter-of-fact way that it was all nonsense, nothing to it. He did attribute the absence of hippopotamuses in the lake area and this region of the Likouala to the presence of the Mokele-mbembe and/or the Emelantouka.

As we waited for the chief to appear the impression that there was an undercurrent of resentment in the air increased. The friendly, outgoing behaviour we had usually encountered in the villages was replaced by a rather sullen reluctance to discuss anything related to the Mokele-mbembe. It was masked to some extent, due to the conspicuous presence of representatives of the Congolese government in our contingent. I asked Georges and Marcellin to try to find out why we were encountering this attitude, so similar to the reaction we had experienced at MOUNGOUNMA BAI. What could be the reason? After all, we had never been to Boha nor had we done anything during our visit that might be a cause for resentment. The chief never did speak with us, even though Marcellin and Georges were able to establish that he was in the village. We also learned that the president of the village's Committee of Elders had been at Lake Tele with Herman Regusters. Gradually, Georges and Celestin got the Boha villagers to explain why everyone was so uncooperative. According to our informants the villagers felt they had been badly treated by the Regusters expedition. They were particularly upset about a lack of respect and sensitivity related to the chief of Boha, who was regarded as the owner of Lake

Tele. They emphasised that any expedition that does not play by their rules, observing certain restrictions regarding Lake Tele, is most certainly doomed to fail.

Several villagers told me that very recently a strange animal had been sighted upstream from Boha. "Was it a Mokele-mbembe?", I asked. They did not know, but were sure it was none of the ordinary animals familiar to them. I asked whether I might meet the actual person who had seen the creature; and soon a man named Patrice Ewite presented himself. He described how a strange animal broke the surface near his dugout in mid-afternoon. The head was large, like an elephant's, but being blunt-nosed the animal was definitely *not* an elephant. The hairless skin was somewhat wrinkled and dark, perhaps black. Although Patrice did not see all of the animal clearly he estimated the length at 3 metres (10 feet). This description, while not very detailed, was sufficient to identify the animal observed as a manatee, not a Mokele-mbembe. Realising there was nothing further to be learned here, we decided to continue homeward toward Epena. My feelings about our experiences were mixed. Like the rest of the expedition members I felt disappointed that, although we seemed to be in the midst of Mokele-mbembe country, we had not seen the animal, much less photographed it. Nevertheless, the conviction persisted that the animal did exist, particularly because we had observed the trail (enigmatic to be sure) of a strange animal, not easily explained by our knowledge of known animals. Our conversation included a lot of references to staying longer and/or returning for a longer time. If we had been free agents, without commitments, we would undoubtedly have stayed on, as we were "so close and yet so far" from seeing and photographing the creature.

My enthusiasm was tempered by the real responsibility of getting our team and specimens back to civilisation intact. Each hour the river levels were dropping. Gene shared my desire to extend the search, but also realised better than anyone else the danger of low water confronting us. Ideally, we would have liked to stay until the beginning of the next rainy season, six months away. Certainly, during such a protracted stay, we ought to have been able to make



38. Sleeping shelter constructed for staying dry even in the event of a heavy downpour.

the much desired contact with a Mokele-mbembe. Everyone understood that wishful thinking about such an extension would not make it possible and we agreed that future expeditions should be promoted. Marcellin, who had started out in a very skeptical mood, was now convinced that the Mokele-mbembe existed. I suggested that he should not wait for us to return, but should try to mount a Congolese expedition as soon as possible.

By now the Bohans had warmed up to us somewhat. As in the other villages we had visited in the area, there were no medical facilities or supplies of any kind. So, when I donated several thousand aspirin tablets to their village, their goodwill was cemented. To add icing to the cake we took the president of the village along with us because he had business at Epena. All of this could not be anything but helpful should we return later.

The journey upriver was uneventful, although both Gene and I were apprehensive about our supply of gasoline. As it turned out, the last drop of gasoline was used up just as we turned into shore

at Epena. We hoped that we would find gasoline still available there for the last and most difficult leg of our journey. While Richard supervised the partial unloading and settling in for the night, Gene and I hurried to the gasoline storage compound. To our relief, gasoline *was* available, as was oil. There we obtained 95 litres (26 gallons) of gasoline and 5 litres (4 quarts) of oil which set our finances back 18,150 CFAs (\$ 60).

Marie discovered that her sleeping pad and one electric lantern had not made it with her from Boha. Fortunately, the way-house had two mattresses, a most welcome surprise. A good night's sleep prior to the ordeal of recrossing the swamp and canal between the Tanga and Ubangi rivers was absolutely necessary. Exactly how low the water level had become was a matter of opinion as no depth markers were available; judgments had to be made by examining the river banks. Everyone agreed that it was going to be exceedingly difficult, if not impossible, to get the big dugout back to the Ubangi.

To Georges's credit, the evening meal was fine indeed. Fundamentals such as sleep, personal hygiene, and food take on special importance after weeks in the bush. A good meal always does a great deal to lift tired and depressed spirits. However, there are always many minor, but irritating incidents that can work on nerves already raw from hardship and fatigue. So tempers flared briefly when Gene dropped the last roll of toilet paper down into the latrine hole.

Justin, Marie, and Richard went off to the beer garden, which did have a stock of beer brought from Brazzaville by barge. All was forgiven after the three of them enjoyed a few bottles together. Meanwhile, Gene and I called on the permanence, as demanded by protocol. We recounted our experiences, which were certainly worthwhile, even though we had not observed and photographed a Mokele-mbembe. The permanence urged us to return, observing that our luck was certain to improve.

The next day, Sunday, began with no end of small, but annoying problems such as the disappearance of two canteens from our gear. Then, after finally getting under way at 9:30 a.m., Marie dis-

covered she had no 16-millimetre film for the movie camera. Next, the outboard motor began to act up. We had to stop while Marie proceeded to unpack half of our float bags in order to find where the movie film had been stored. While the search continued, Gene and I cleared the fuel line to the outboard motor, and off we went. The run to the mouth of the Tanga River lasted only about an hour, but again we were delayed because of a fouled spark plug in the 7.5 HP motor on the small dugout. After the plug was cleaned the motor ran well and we reached Botala at noon. From there on the upper Tanga was incredibly beautiful. The river winds gently through jungle reminiscent of a Florida mangrove swamp. A variety of air plants added to the exquisite decor of the canopy, 30 metres (100 feet) high. Surfeited with so much natural beauty we arrived at the village of Louesso at 2:30 p.m. To our delight Georges located an abundant supply of oranges, about two hundred of which we were able to purchase for 1,000 CFAs (\$ 3)—a real bargain. No one need suffer from scurvy in this land of abundant citrus fruit.

Our dugouts were drawn up as far as possible on the shore, but an area of mucky water the consistency of oozy custard still separated us from land. Richard was the last to disembark. He had climbed into the gunwale of the large dugout and was precariously treading his way toward the bow of the dugout, thus trying to avoid wading in the muck. Gene and I opted for the more secure, if messier, route of wading through the calf-high muck. Suddenly we heard a loud plop. Startled, we saw Richard spread-eagled in the ooze, covered from head to toe. Gene and I managed to suppress our mirth with some difficulty, although I couldn't resist saying that if Marie had been able to capture the scene on camera, Richard would have had a priceless heirloom to hand down to his grandchildren.

After this interlude and an exchange of friendly conversation with the villagers, we made off for the most hazardous and difficult part of our journey, the entrance to the canal. Gradually the river narrowed until it was only a small stream completely enclosed by a cool green canopy of jungle growth. The sound of a sickening



39. Often it was necessary to disembark from our dugouts and even partially unload gear in order to reduce the draft of the dugouts so that passage through the now shallow water was possible.

crash periodically announced that the bow of our dugout had encountered another submerged log. Georges would shout "Tombola! Tombola!" ("Raise up! Raise up!"), "Simba Ky!" ("Grab your paddle!"), and "Py wapi?" ("Which way?"). In spite of these difficulties we reached Mossombe, the campsite at the beginning of the canal, before nightfall. Fortunately the rough shelters constructed as overnight camps for travellers were unoccupied. These shelters, while crude, offered a reasonably safe respite. Little platforms built of branches and poles kept us up off the damp soil and away from stray crawling, creeping creatures. A roof of palm leaves kept most of the rain away from the sleepers.

Immediately after the evening meal everyone turned in, anticipating a really difficult journey on the morrow. The depth marker at the water's edge indicated that the water level had dropped a good half metre since our passage through the area in

early November. This boded ill for our large dugout, the keel of which would undoubtedly encounter many additional underwater obstacles such as rocks and submerged logs.

Departing at first light, our worst fears were realised. Ordinarily during high water in a small dugout with a shallow draft, progress through the canal proceeds at a rate of about 2 kilometres (1 ¾ miles) per hour for a total transit time of about eight hours. In our case, almost every metre forward was won by brute force. On we went, over and around countless submerged logs—a continual physical agony of pulling, pushing, poling, paddling, chopping branches and logs, and frequent disembarkations to lighten the dugouts so as to float them higher out of the water.

After nine hours of agonising effort, we had traversed a mere 8 kilometres (5 miles), only half the distance. It was close on 3:00 p.m. and only three more hours of daylight remained. Assuming our pace could be maintained in the darkness of the jungle night (a highly unlikely state of affairs), it would be midnight before we emerged from this tunnel through the jungle. It was at this point that we got into our first real “jam,” with the large dugout being unable to move forward or backward off of a submerged log. A lot of discussion ensued on how to free ourselves, with orders shooting back and forth in various languages between the Americans and the Congolese and the Congolese and the pygmies.

Finally, as is so often the case with good explorers rising to the necessity of the occasion, Richard—who was already in a bad mood that day—jumped into the water and inspected the problem. With his first-hand knowledge of the nature of the obstruction—he had to feel underwater with his hands to determine which way the log was inclined—we were able to clear it. We soon encountered another, however, so Richard went over the side again, and then again.

When a torrential rain soaked us during mid-afternoon, dire necessity drove us on through the downpour. Wire-like leaves lashed and caught at us, once hurling Marcellin clean out of the dugout. Snake encounters were frequent, thirteen noted during daylight, fortunately none resulting in bites. The snakes would

drop from the jungle undergrowth as we passed, in spite of our efforts to beat at all low, overhanging branches and tree fronds. Once a small black mamba dropped onto my shoulder, then bounced into the water. This upset Georges greatly and shook me up too.

It became obvious eventually that the large dugout, loaded as heavily as it was, had become our albatross, and so we transferred the spare 40-HP outboard and an additional 75 kilograms (150 pounds) to the small dugout. This was a great help but fell far short of solving our problems with the big dugout. As darkness obscured our vision, the feeble light of the few remaining functional electric lanterns did very little to pierce the gloom of the jungle night.

Richard, meanwhile, kept going over the side to help us get by the underwater obstructions. We now had to do this in pitch darkness—with only one flashlight working—oblivious to the snakes or whatever else lurked in the water, which often came up to Richard's chest. His boots sank deep into the black swamp mud, which sometimes reached his knees. None of the Congolese or pygmies would venture with him into the unknown of the dark waters swirling around us.



40. The end of the Djemba canal as well as the expedition. Marcellin Agnagna and a pygmy attempt to remove a submerged log blocking the path of our dugout.

Richard's fears actually had less to do with snakes or crocodiles, which were the main concern of our African friends, than with the real danger of being crushed: once he had determined the source of the obstruction, he had to muster all his strength to lift the front end of the large dugout (now a little lighter with him out of it), even if only by a centimetre, so that we could either punt it back off the submerged log and try in another direction, or propel it rapidly over the log. When this happened Richard had to either submerge completely as the dugout went over him, or cling on to the front end as it moved forward. He always opted for the latter, but the danger then was not knowing where and when the next submerged tree trunk would bar our way. If one were very close—and the distance varied—he could be crushed against it. Fortunately, it didn't happen.

Today Richard has little recollection of the specific event—all events having merged into a long and seemingly never-ending bad dream. He doesn't remember how many times he went into the water, but he did it on and off for about nine hours, so he must have done it dozens of times; and each time Marien, sitting near the front of the dugout, had to help him climb back in, as he was too exhausted to lift himself up. He does remember, on two occasions, thinking to himself that it would be impossible to get the dugout past the obstruction—although he didn't tell us so at the time—only to find that he was wrong when we all worked together to solve the problem.

We had no time to eat but our purchase of 200 oranges eaten on the run bolstered our flagging strength to some extent. At about 10:00 p.m. the worst happened! The last flashlight gave out and we were in *total* darkness. Without hesitation everyone agreed to push on in the eerie darkness, in spite of vestigial fears inspired by the dark unknown surrounding us in the bush.

Our progress during the next half hour was painfully slow. I collected all the flashlights which were of two types: one using a large square battery and a small fluorescent bulb, the other an ordinary, domestic variety with standard D cells. I sorted all the batteries of each type into two piles in the darkness. Then, selec-

ting two at random, I tried to find two batteries that were not completely dead, knowing that batteries hardly ever run down at the same rate. After trying a dozen or more combinations I found two that gave a reasonable amount of light. This success cheered everyone. The small dugout, which was in the lead, now had a lighted prow to guide us.

Because I had no idea how long the batteries would hold up, I continued to check the balance of our battery stock and eventually found a second pair that worked fairly well together. Prudently I kept this working light in reserve. In about an hour the first flashlight gave out, but my reserve light came on and we were away again. An eternity seemed to have passed and still we had not reached Mweto, the little village at the eastern end of the canal. Just before midnight the pygmies began an animated verbal exchange and Gene informed us that we would arrive at Mweto soon. More welcome news would have been impossible to conceive. A sharp turn took us to the left and, suddenly, there was the village with human beings and lighted fires. Gene quietly offered up a fervent prayer of thanksgiving. We had made it through the treacherous canal without so much as one snake bite! As soon as we reached Mweto Richard's strength completely left him, as if his body knew it was no longer needed, and he could hardly make his way to the village. He was drained and exhausted, soaked and shivering; Justin had to help him get undressed and bedded-down. Camp was made in a very makeshift manner that night as we had all pushed ourselves to our physical limit. Richard, with his record of being attractive to ants, again lived up to his reputation when he inadvertently pitched his tent over a small anthill.

During the night the ants riddled his sleeping mattress with holes, chewing through leather, foam rubber, plastic, and anything else that obstructed their progress. Fortunately, by morning, they were just on the verge of breaking through the last barrier separating Richard's skin from the onslaught. Undoubtedly another hour of chewing would have provided even more fun for everyone, exclusive of Richard, of course, who had to listen to a good deal of good-natured ribbing.

With a good night's sleep Richard had recovered somewhat from his ordeal, although he couldn't lift or carry anything for several days because of the swellings and cuts on his hands—which he could not close. We all thanked him, for we knew that without his efforts we never would have manoeuvred the dugout through the canal. Celestin, who had often referred to Richard as “the delicate Englishman” throughout the expedition, came up to him and said: “Richard, I want to say that Englishmen are very delicate, but they are also very strong and very brave.” I think that those few words from Celestin meant more to Richard than anything else the rest of us said or could have said.

After a hearty breakfast of fresh bananas we screwed our outboard motors optimistically into place and departed under power. Our optimism soon gave way to dismay as we entered another sea of floating grass separating us from the Ubangi. The water level had dropped so low that the main channel was impassable with outboards. Back to pushing and paddling. Occasionally an open stretch of water permitted us to use the small 7.5-HP outboard, which had a shallow draft. On these occasions we would chain the two dugouts together so as to save paddling. This was a slow process, but was certainly better than straining our far-from-recovered muscles. At last the mighty Ubangi came into view. A spontaneous cheer rose from everyone's lips and our spirits lifted instantly.

As soon as we were clear of grass in the Ubangi, Gene put the 40-HP outboard on full throttle. It drove us through the water downstream, with the current, at about 20 kilometres per hour. If such a speed had been possible in the canal we would have been through in less than an hour. But all the agony and pain were behind us; clean beds, showers, and cold drinking water awaited us at the mission. After the Likouala swamps these small luxuries were infinitely precious. To our surprise, the people of the mission, with Gene's wife, Sandy, and Linda in the forefront, were awaiting us. Sandy explained that she had dreamed the previous night that we would return around noon the next day. I was astonished that she placed such confidence in her dream. More exciting was the news that a monster (Mokele-mbembe?) had been observed only a few

kilometres upstream from Impfondo, near the right bank of the Ubangi. The observer was willing to guide us to the spot—obviously the first order of business the next day.

After showers and clean clothes, Judy Look drove Marie, Justin and Richard off to the nearby pygmy village to join in the celebration of our pygmies' return. I remained at the mission to pay off our Congolese and to distribute most of our equipment as gifts, and to enjoy the best part of my return to Impfondo, an expert and much-needed haircut given to me by Linda. To my amazement, I discovered that, indeed, I did have ears.

The next morning dawned clear and sunny. Refreshed, everyone was ready to investigate the alleged monster sighting. Timothy Konza, our African informant, appeared promptly at 9:00 a.m. Everybody at the mission was interested in the monster hunt, but because the dugout would hold only ten people we had to be selective. Konza told us that, in August 1981, he had been fishing near the Zaire shore of the Ubangi river. He recalled that about midnight, as he was casting his net from his dugout, he had some problems with the net and turned on a flashlight. He was close inshore, about 10 metres (30 feet) from the bank, when, to his astonishment, he saw the back of a long-necked animal standing out of the water. The creature was bigger than a hippopotamus. The eyes shone in the light of Konza's torch and he was absolutely certain it was not a crocodile. He noted a conspicuously broken palm tree at that spot. He stated that he did not linger but paddled off as fast as possible. It certainly sounded like a Mokele-mbembe sighting. Konza told us that his recent sighting, a week earlier, had been at the same location. He took us directly to the place, and there indeed was the broken palm tree as described. His description of this monster, to our surprise, differed completely from his earlier report. He told us the skin texture was like an elephant's, and the head was very big, hardly differentiated from the short, thick neck that blended into the body of the animal. He estimated the size at 3 metres (10 feet). My heart sank, for as more details were trotted out, I realised he was describing a manatee, undoubtedly *Trichechus senegalensis*. Everyone was disappointed when I explained the iden-

tification. We realised that manatees were unknown to our informant and that he had not intentionally misled us. There was nothing to do but return to Impfondo, sans a Mokele-mbembe.

I was reassured about one thing, however. Konza's earlier report described what most certainly could be classified as a Mokele-mbembe for he differentiated it clearly from his observation of what was obviously a manatee. Although both animals were unknown to him he hadn't confused them in his reporting, and I felt this underscored the reliability of our African informants.

Upon our return to the mission, the only remaining business was the packing of our gear, most of which we were leaving behind as gifts to the mission and our many African friends, especially the pygmies who had guided us safely through countless dangers. On the morning of December 3, 1981, the day of our departure, we secured our passports, and then posed with officials and friends at Impfondo, both for still photographs and for 8-millimetre motion-picture sequences. True to its nature the mission truck, loaded with our personal belongings, including pygmy crossbows, spears of various types, and our specimen collection, developed a flat tyre. Without a jack it took a lot of human muscle and lifting poles to raise the truck sufficiently high so that the tyre could be replaced by the spare. This accomplished, we arrived at the Lina Congo office without further incident. To our dismay our gear was much overweight. We looked over it quickly, becoming more generous in the process, distributing further gifts to reduce weight. In the end the remaining overweight cost us 11,500 CFAs (about \$ 40), which was barely within our now depleted budget. To our delight and relief, the Lina Congo F28, two-engined plane appeared in the air at 2:00 p.m., as scheduled. Soon, after tearful good-byes, we were winging our way back to Brazzaville.

Arriving at Maya Maya airport, Brazzaville, we hired two taxis to take us to ORSTOM where we would be staying until our departure for the United States. In view of our depleted financial condition, the kindness of the French scientists of ORSTOM was much appreciated. Their hospitality did not stop with the provision of living quarters, but also included some of the finest French wine,

bread, and cheese I have ever tasted. We tried to relax but as there was so much to do before we left the Congo it was impossible to rest on our laurels. I reviewed the "must-do" items, which included an appearance on Brazzaville television to report the results of our exploration and concluded that there simply was not enough time. A quick trip to the UTA (Air France) office solved the problem by postponing our departure to Sunday, December 6, 1981. On 5 December Marcellin and I went on television at 2:00 p.m. Marcellin translated into French my answers to our host's questions quite successfully. I was only sorry that I could not report actually having seen a Mokele-mbembe. "Do you believe they exist?", the television host asked. "Yes, indeed", I replied, "but I do not know exactly what kind of animal they might be. A dinosaur possibly, but not necessarily".

After the show we all met at Bob Murphy's house, the cultural attaché for the United States. Again we had to eat and run since our expedition report to the Ministry of Water and Forests had to be completed before our departure. Justin, Marcellin, Richard, and I all worked on the report, relying on Marcellin to produce an acceptable French translation. As soon as the report was completed, everyone began packing personal gear for our 10:45 a.m. departure the next day. At 8:00 a.m., the ORSTOM truck arrived to carry our gear to Maya Maya. All our new and old friends in Brazzaville, including Dr. Trapp of ORSTOM and Alain Duque, accompanied us to the airport.

As soon as we began to check in our luggage I sensed that a problem was developing. The essence of it was that the French airport manager was out of sorts and refused to honour the allowance of free air cargo provided to the expedition by TWA and Air France. In spite of heroic intercession by Trapp and Duque, the airport manager was adamant: we had to pay 219,000 CFAs (\$ 830) in overweight costs. Under duress I had no choice but to acquiesce. To our surprise the plane took off heading north, landing shortly at Bangui in the Central African Republic. The UTA crew was so agreeable we almost forgave the airport manager. They told us that, because of a storm, our plane had been diverted to pick up

passengers at Bangui and this had produced a serious overweight problem for the manager. I told them I failed to see how paying for overweight luggage alleviated the weight problem. In reply, they smiled with a Gallic shrug. In Paris, Air France put us all up in the Sofitel, an elegant hotel, and that courtesy went a long way towards smoothing our ruffled feathers—all except Richard, that is, who spent a great deal of time arguing with both airline officials and French government personnel. His pet subjects of contention were his pygmy crossbow and whether the X-ray of his photographic slides would be allowed or not. As far as I can remember he won some and lost some, but no one was bored during the process.

An uneventful but pleasant flight to Kennedy airport marked the end of the Mackal-Bryan Likouala Expedition. In spite of our curious collection of specimens and artifacts we all passed through customs without incident. Marie would head now for Santa Monica, Richard and Justin to Tucson, and I to Chicago, where there would be many things to do, helping to soften the culture shock of a transition from a jungle to a city life. Most important was the development of all our photographic film, especially the 3,000 colour slides, which had been promised to *Geo*, *Paris Match*, and *National Geographic*, the three magazines which had helped finance the expedition. Shortly, to our relief, the photographic laboratories determined that the high humidity and temperature of the swamp had not damaged our pictures. Of course, it was unfortunate there were no pictures of a living, breathing Mokelembembe, but my thought was, "Tomorrow is another day, and we'll be back."

15

More Evidence

The interlocking complexities of the reports of unidentified animals in the Likouala are greater than I was led to believe at first. In order to try to sort out these zoological enigmas it is necessary to consider all available evidence. To that end I checked some of the writings and reports of West African explorers beginning with Mary H. Kingsley, one of the greatest African explorers of all time. Her expedition in West Africa covered the period 1892-1900. Of particular interest to us is her exploration of the Ogowé River, the area where Trader Horn spent most of his African sojourn and where he had received reports of the *amali*. Although Mary Kingsley wrote at great length (more than six volumes) concerning her explorations, there is no reference that could be related even remotely to the *amali* or to other similar creatures.

Volumes 1 and 2 of *Travels in Western Africa* by John Duncan were published in 1847, and covered the period 1845-46. Duncan was the first to penetrate an area on the African coast between 6° and 13° north latitude and 1° to 3° east longitude. This was to the north and east of the Proyart and Trader Horn areas and was centred over what was known as Dahomey, now part of Nigeria. A careful reading of his narrative reveals Duncan's keen interest in strange animals, with reference to a number of strange creatures unknown at the time: a snake-lizard, a species of vampire bat, and the "Patakoo," which he later identified as a hyena. Nowhere, however, is there any allusion to an *amali*-type of animal.

Part of the Ogowé-Congo River basin region was extensively explored by Paul Du Chaillu, 1855-66. Du Chaillu was very interested in animals, especially the gorilla which had been accepted as real only in 1852. He succeeded in obtaining a number of young live gorillas which he shipped to London. Du Chaillu was

never reluctant to report strange information, as evidenced by his report of another primate, the *Kooloo-Kamba*, different from the chimpanzee or the gorilla, according to him more human-like than either of the former, and possibly one of the bases for the Tarzan stories. Nowhere, however, does Du Chaillu write of an *amali*. The reader will recall that Hans Schomburgk was unable to investigate the reports at Lake Bangweulu to any extent because of some problems with malaria. However, an Englishman, J. E. Hughes, spent eighteen years at Lake Bangweulu from 1901 to 1919, investigating the matter of an alleged strange animal, called *Chipekwe* by the natives in the region. Born in 1876 in Derbyshire, Hughes attended Cambridge when he came of age, but states he shrank from a career in the Church of England. He was delighted when the British South Africa Company offered him an appointment as assistant native commissioner in the then newly formed civil service of North-East Rhodesia. After three years of service at Nawalia Division, the upper area of the Luangwa Valley, Hughes was transferred to the Serenje Station in the Ilala country on top of the Mchinga Mountains, where he served another two years. This was a much healthier area as malaria was virtually absent. He returned home for a furlough and was subsequently transferred to Fort Roseberry Station in the Luapulu district. After seven years of service Hughes resigned in order to have full freedom as a hunter and trader.

Hughes immediately moved his belongings from Fort Roseberry to Mbawala Islands on Bangweula, and spent the next eighteen years on the lake organising hunting expeditions. He published a number of magazine articles and, in 1933, a book entitled *Eighteen Years on Lake Bangweulu*. On page 146, we find the following entry:

“CHIBEKWE.—For many years there has been a persistent rumour that a huge prehistoric animal was to be found in the waters of our Lake Bangweulu. Certainly the natives talk about such a beast, and ‘Chipekwe’, or ‘Chimpekwe’, is the name by which they call it.

I find it is a fact that Herr Hagenbeck sent up an expedition in search of this animal, but none of them ever reached the Luapula or the

Lake, owing to fever, etc; they had come out at the wrong time of the year for newcomers.

Mr. H. Croad, the retired magistrate, is inclined to think that there is something in the legend. He told me that one night, camped by the edge of a very deep small lake, he heard a tremendous splashing during the night, and in the morning found a spoor on the bank—not that of any animal he knew, and he knows them all.

Another bit of evidence about it is the story Kanyeshia, son of Mieri-Mieri, the Waushi Paramount Chief, told me. His grandfather had said that he could remember one of these animals being killed in the Luapula in the deep water below the Lubwe.

A good description of the hunt has been handed down by tradition. It took many of the best hunters the whole day spearing it with their large 'Viwingo' harpoons—the same as they use today for the hippo. It is described as having a smooth dark body, without bristles, and armed with a single smooth white horn fixed like the horn of a rhinoceros, but composed of smooth white ivory, very highly polished. It is a pity they did not keep it, as I would have given them anything they liked for it.

I noticed in Carl Hagenbeck's book 'Beasts and Men', abridged edition, 1909, p. 96, that the Chipekwe has been illustrated in Bushman paintings. This is a very interesting point, which seems to confirm the native legend of the existence of such a beast.

Lake Young is named on the map after its discoverer, Mr. Robert Young, formerly N.C. in charge of Chinsali. The native name of the lake is 'Shiwangandu'. When exploring this part in the earliest days of the Administration, he took a shot at an object in some floating sudd that looked like a duck; it dived and went away, leaving a wake like a screw steamer. This lake is drained by the Manshya River, which runs into the Chambezi. The lake itself is just half-way between Mpika and Chinsale Station.

Mr. Young told me that the natives once pulled their canoes up the Manshya into this lake. They were a party of men, women and children out on a hippo-harpooning expedition. The natives claimed that the Guardian Spirit of the lake objected to this and showed his anger by upsetting and destroying all the men and the canoes. The women and children who had remained on the shore all saw this take place. Not a single man returned and the women and children returned alone to the Chambezi. He further said that never since has a canoe been seen on Lake Young. It is true that I never saw one there myself. Young thinks the Chipekwe is still surviving there.

Another bit of hearsay evidence was given me by Mr. Croad. This was told him by Mr. R. M. Green, who many years ago, built his lonely hermitage on our Lulimala in the Ilala country about 1906. Green said that the natives reported a hippo having been killed by a Chipekwe in the Lukula—the next river. The throat was torn out.

II *S* a BRONTOSAURUS ROAMING AFRICA'S WILDS ?

HERR CARL HAGENBECK Deeply Interested in Stories to the Effect That a Creature Which Is Supposed to Have Disappeared Millions of Years Ago Has Been Found Alive in the Dim Recesses of the Dark Continent—Dr. W. D. Mathew, of the American Museum, Thinks a Native Has Seen a Gigantic Sea Cow in an Inland Lake



THE PLEIOLAURUS
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Musical Association

SUNBURNED, strong, muscular, attuned physically to prehistoric monsters which once roamed the white, fearful of mice, shaking the waters with the beat of his mighty body, has been seen in one of the inland lakes of Africa, and

But Fats Haglund, singer and host of one of the nation's top bar-band acts of this kind, who may be found in the cigarette stands of all, and he has thought enough of the opera which has come to him from the margins to devote several programs to them in his recent work, "Secrets and Lies," which is just from the British press. Can it be that some distance descended from the rare expiring long ago to have disappeared from the face of the earth all signs as the just descendant of a single species—the "Shander" family of the ancient East—within the members of the African brotherhood, who are now, how many generations ago?

And so what must have been prearranged? It is clear that the *Shogakukan* leaves it. But from the nature of the text, this might develop in the direction of *Shinsho*. The *Shogakukan* already has quoted several of the *kyōka* before, and it is a huge monster, but *Shinsho* and *haikai* *kyōka*, which includes the *kyōka* of the *senryū* *kyōka* and is a letter to all men by means of 100 *senryū* and the existence of its *kyōka* book.

But of course are inclined to question all that has become within their ken. After they had been asked for their views in the South African group and had known doubt on the *credibility* of the author, they are inclined to pause and reconsider, for the composition of the *Shinsho* (Shinsho) written with the same spirit as the *senryū* which has been found from the *Shinsho* itself, which is the *senryū* *kyōka*.

He subverted in these sketches and pictures, more or less, the material taken from the poetry books; there from his own imagination, and yet others which represent composite types of all the strange pictures in the sea or on the earth which now are in our time. The Africans voluptuously grow on the descriptions. What they have seen, as they put it, has the hand and tail of a crocodile, the horns

a character, the neck of a giraffe and the body of a kangaroo," and it begins with one sentence: "There is a fundamental truth concerning the nature of a creature when fully they have seen in the water, but little when they stay in any manner anywhere from twenty to a fifty feet. Those who have talked with you must who believe they have seen such a monster are surprised by their strange distorted manner and the complete absence of any motive for exaggeration. Those who are familiar with the wonders of the African continent know that there are more strange fables put to be revealed by the unscrupulous fabricator, and are not so easily deceived as in a fundamental truth for what these men have said."

It is now more certain that the duck-shaped pterosaur could not exist, which has been described by the men of the present day.

Concerning the types of animals which exist in Africa in the twelfth century there is much to be learned, and what was to the past is being revealed by patient research. The earliest forms of the elephants which were found in lower Egypt by excavations under the direction of Professor Henry Fairfield Osborn, president of the American Museum of Natural History and one of the leading authorities in paleontology in the world, show that the types which once existed on the African continent were progressively changed.

But many years ago, it's different. It will be in

ated with a certain degree of regularity. Taking into consideration that not only in Africa, but in other continents as well, there are thousands of square miles of land which have never had any geological survey, the wonder tales of oilmen will grow with the lapse of time. For the most patient investigators have as yet done little more than scratch the surface.

Dr. W. F. Matthews, of the Department of Paleontology in the American Museum, is among the scientists who are deeply interested in the studies which give Hayden's tax contributed important research results to paleontology concerning the members of the Athysanella.

"Many more valuable have been discovered in Africa," said Dr. Matthews, "even within the past year. As for instance, it was not known until within recent years that there was such a thing as an okapi, which is now familiar to nearly every one through the pictures in the newspapers and the magazines. It is allied to the zebra and its existence was first made known by English explorers. There are still regions not only in Africa but in South America where the fear of the white man never has died. Occasionally some single brave specimens of a type of creature never before described, known and kept in our hands."

Mysterious creature, resembling the *Brontosaurus*, drawn from a description by two natives of Northern Rhodesia.

the sun. I went especially to sunset which was
down into the yard of an inn in line of the horizon of
Brazil - a large tablet - no garden in appearance
that he at once caught the attention of all who saw
him. He was killed and his skin presented to a mu-
seum. Nothing like him has ever been seen before
or since.

"It is impossible with an 80% to 90% open line and you can have an idea of just what it was like

these matters up. If I had to start before me and then heard their stories I should be able to disagree with a reasonable degree of accuracy what this strange nucleus was. Presumably, I am inclined to the belief that they have given nearly a veridical description, and cannot give much credence to the story. However, I would not dismiss their narrative as impossible, impossible as it may seem.

CONTINUED ON PAGE THREE

I have been to the Lukulu many times and explored it from its source via the Lavusi Mountain to where it loses itself in the reeds of the Big Swamp, without finding the slightest sign of any such survival of prehistoric ages.

When I first heard about this animal, I circulated the news that I would give a reward of either £5 or a bale of cloth in return for any evidence, such as a bone, a horn, a scrap of hide, or a spoor, that such an animal might possibly exist. For about fifteen years I had native buyers traversing every waterway and picking up other skins for me. No trace of the Chipekwe was ever produced; the reward is still unclaimed.

My own theory is that such an animal did really exist, but is now extinct. Probably disappearing when the Luapula cut its way to a lower level—thus reducing the level of the previously existing big lake, which is shown by the pebbled foothills of the far-distant mountains.”

Hughes reiterates his conclusion in his article in the *Field* of 23 September 1911, entitled “The Haunts of the Situtunga.” He writes:

“This gigantic Swamp is a strange and fascinating place. The tall reeds and papyrus are intersected by a labyrinth of deep and gloomy channels, through which a narrow canoe will pass. Strange-shaped, long legged birds of all colours and sizes appear and vanish; an occasional otter glides across the channel, and the black muzzle of a crocodile sinks quietly as you approach. The mosquitoes attract one’s attention. There is a large yellow variety which bites all through the heat of the day. The shy Situtunga skulking in the reeds is heard, but never seen. The same with the Watwa or canoe people, whose little huts, built on piles, are hidden in the reeds. They are fine, strong men, and as wild as the things among which they live. Native folklore peoples the great Swamp with stranger denizens still; a beautiful striped antelope that no white man has ever seen, the Chipekwe, a gigantic reptile with a single snow-white horn that can kill a hippo; a huge black leopard with a short tail that preys on the Lechwe and Situtunga, and so on. I believe in this unknown antelope, and mean to get one this year. I have his name and address, and have seen a skin. The Swamp leopard is vouched for by a Native Commissioner, who had an encounter with one which wounded some of his men and escaped. I believe that the Chipekwe does not exist, but think that it did at a former period.”

The latter conclusion is a fair enough assessment, especially after eighteen years in the area. I might only add a more hopeful note—

that the Chipekwe may have moved out of the area to more remote regions. Everything we have learned during our own expeditions indicates that these animals move freely under cover of the river systems.

We now turn to what is perhaps the most disreputable episode in the African saurian saga. These events were responsible for placing an unjustified cloud over all that had previously been reported. I will give the reader an overview rather than a detailed blow-by-blow description of the unsavoury business. To those interested in greater detail I refer them to Bernard Heuvelmans's books, *On the Track of Unknown Animals* and *Les Derniers Dragons d'Afrique*.

Although there had been journalistic interest in the possibility of unknown animals in the Congo before World War I*, the global conflict, understandably, turned attention away from the matter. When the war's end brought a return to normality a series of public events and episodes began that were to discredit the strange Congo animal mystery for the next fifty years. The press, and as a result, the public at large, had become interested again in a possible Congo dinosaur, as it was being billed.

Early in 1919 newspaper articles began to appear, based on a delayed Reuter message from Bulawayo by a Belgian prospector and big game hunter, M. Gapelle. The *San Francisco Examiner* carried comments about Gapelle's claims in its 20 August 1919 edition. The comments were direct quotes by Dr. W. K. Gregory and Dr. F. A. Lucas of the American Museum of Natural History. They took the not-unreasonable position that a living brontosaurus in Africa was most improbable.

The *New York Times* printed the report in its 13 December 1919 edition, although this was not the first newspaper account. The article was headlined, "Hunter Says He Saw Prehistoric Monster.

* Typical of the reports was one from the magazine section of the Sunday *New York Herald*, 13 February 1910, entitled "Is A Brontosaurus Roaming Africa's Wilds?". This article, based on the entry in Carl Hagenbeck's book, was reasonably sober, in spite of its sensational title. There were also some observations by Dr. W. D. Matthew of the Department of Paleontology in the American Museum, who, to his credit, stated that there might be some kind of unknown animal involved.

Belgian Returns from Congo with a Story of Tracking Down a Brontosaurus''.

“Details of the alleged discovery of a survivor of the prehistoric Brontosaurus are given in a delayed Reuter message from Bulawayo by the Belgian prospector and big game hunter, M. Gapelle, who has returned there from the interior of the Congo States. He followed up strange footprints for twelve miles and at length, he says, sighted a beast of the rhinoceros order with large scales reaching far down its body.

The animal, he says, has a very thick kangaroo-like tail, a horn on its snout and a hump on its back. Gapelle fired some shots at the beast which threw up its head and disappeared into the swamp. It was pointed out that the American Smithsonian expedition was in search of the monster referred to above when the members of the party met with a railway accident in which several persons were killed.

Discussing the Smithsonian expedition yesterday, Dr. S. F. Harmer, director of the zoological section of the British Museum of Natural History, while keeping an open mind said:

‘I should doubt strongly the survival of any of the race of Dinosaurs, the enormous creatures belong to so remote an age. In the forest and swamp of untrodden portions of Africa there are probably remarkable specimens of unknown beasts, but the likelihood is they are mammals of a much later type. The discovery in modern times of remains of extinct animals has all been of creatures comparatively recently extinct. It was only at the beginning of the last century that the great auk became extinct and the dodo, which was living on Mauritius, was not of so greatly remote a period as the Dinosaur or Brontosaurus. The remains of the mammoths were in a similar category, namely mammals of a recent period.’ ”

Another report, 17 November 1919, was published in the *Times*, entitled “A Tale from Africa, Semper aliquid novi”. The Central News Port Elizabeth correspondent sent the following:

“The head of the local museum here has received information from a M. Lepage, who was in charge of railway construction in the Belgian Congo, of an exciting adventure last month. While Lepage was hunting one day in October he came upon an extraordinary monster, which charged at him. Lepage fired but was forced to flee, with the monster in chase. The animal before long gave up the chase and Lepage was able to examine it through binoculars. The animal, he says, was about 24 ft. in length with a long pointed snout adorned with tusks like horns and a short horn above the nostrils. The front feet were like those of a horse and the hind hoofs were cloven. There was a scaly hump on the monster’s shoulders.

The animal later charged through the native village of Fungurume, destroying the huts and killing some native dwellers. A hunt was at once organized but the Government has forbidden the molestation of the animal, on the grounds that it is probably a relic of antiquity. There is a wild trackless region in the neighbourhood which contains many swamps and marshes, where, says the head of the museum, it is possible that a few primeval monsters may survive.”

Based on these reports, the stories escalated, expanded, and fused, becoming more and more wonderful. On the strength of these reports, a variety of individuals talked about and even mounted expeditions to investigate the matter.

The *Times* (London) printed the following bombshell on 23 February 1920:

“Sir, I am authorised to contradict the statement that the members of the Smithsonian African Expedition who proceeded to this territory came here to hunt brontosaurus. There is no foundation for this statement. I may also state that the report of the brontosaurus arose from a piece of practical joking in the first instance, and, as regards the prospector “Gapelle,” this gentlemen does not exist except in the imagination of a second practical joker, who ingeniously coined the name from that of Mr. L. Le Page.

Yours faithfully,
Wentworth D. Gray

Acting Representative
of the Smithsonian
African Expedition in
the Katanga
Elizabethville, Jan.
21.”

So there we have it! Lepage and Gapelle, either singularly or collectively, represent a hoax.

Eight years later the *Washington Post* revived the now discredited African saurian business with an article published on Sunday, 19 February 1929, “Searching for Saurians in African Jungle”. The article contributes nothing concrete; it only raises the issue “Are Scions of the Prehistoric Monsters That Once Roamed the Earth

Still to Be Found within Little-Known Parts of the Dark Continent? Here are Weird Tales, Told to Huntsmen by the Junglemen, of Strange Beasts That Lurk in the Wilds in Their Primitive State''.

Four years later the hoaxers were at it again, basing their tricks on some of the real reports presented in the first chapter. F. Grobler based his report on the Chipekwe of Schomburgk and Hughes, while a Swede, J. C. Johanson, wrote a letter describing his encounter with a monster about 16 yards in length, with a lizard's head and tail; and he provided a photograph of the monster. The photograph, as pointed out by Bernard Heuvelmans, is a crude fake in which a Komodo dragon has been transplanted into an African swamp scene.

To the reader it may at first glance seem to be a waste of time to dwell on a clearly established hoax, even in a somewhat cursory fashion. I have found that this is not the case. When dealing with purely anecdotal evidence, it is valuable and instructive to study each fraudulent episode carefully so that specific criteria and experience are developed that may later enhance one's judgmental effectiveness.

So far, we have considered older evidence that includes no reliable observations of actual animals by anyone other than native peoples. As will be reported from here on, modern information up to the very date of the departure of my first expedition weighed most heavily in my decision to pursue this matter myself.

The next piece of evidence comes from a personal acquaintance of mine, unfortunately now deceased, the zoologist and popular writer, Ivan T. Sanderson. Sanderson started his career as a brilliant zoologist (in my opinion), but, over the years, became more and more sensational and exploitative in his writings. Nevertheless, based on my contact with Sanderson, I believe he was no one's fool, and rarely deluded himself, regardless of how unscrupulous he was in his later writings. His report of his experiences during the Percy Sladen Expedition to West Cameroon in 1932 possibly qualifies him as being one of the few western explorers to have seen a Mokele-mbembe.

When Sanderson, in the company of the American naturalist Gerald Russell, arrived at Mamfe Pool on the Mainyu River, they came to a place that had many caves in the cliff-like river banks, many partially or almost completely filled with river water. They reported a loud, noisy disturbance, as of fighting beasts, coming from one of the caves. Both saw the back of something larger than a hippopotamus break the surface, immediately submerging after only a momentary display. Farther upstream near the confluence of the Cross River, they saw "vast hippo-like tracks: although there were no hippopotami in the area". Sanderson was told there were no hippos because this creature, the "embulu-em'bembe" (Sanderson's spelling), drove them away. Sanderson stated that the tracks they found on the Mainyu River could not possibly have been made by a crocodile. He believed that what was observed rising in the cave was the head of the creature. In 1971, Sanderson, in a letter to James Powell, wrote that its head "was bigger than a whole hippo, and the tracks were sauropod."

This reference by Sanderson to a large head belonging to a sauropod always bothered me a great deal. Sanderson knew very well that all sauropods had long necks with small heads. However, as we discovered during my expeditions, the term Mokele-mbembe is used for the long-necked, small-headed sauropod animal, on the one hand, and in a generic sense for other unidentified animals, including an animal with similar characteristics, except that the head-neck is short and very large. If Sanderson and Russell saw this type of Mokele-mbembe the discrepancy would be explained. Sanderson also reported finding large, football-sized fruits that had dropped from vines in the area, which showed tooth marks, presumably made by the "embulu-em'bembe."

There are still other separate reports by two unrelated westerners, one of whom alleges to have actually seen a Mokele-mbembe. These reports are important because they were made by still living, credible observers.

The first communication, addressed to me at the University of Chicago, comes from J. M. Lefebvre, dated Pretoria, 14 July 1981. The text of the letter follows, exactly as written:

“Dear Sir,

Will you please forgive me my bad english, my home language is french, and I still have some communication problems-

The ‘Pretoria News’ have communicate your adress to me, asking me to contact you.

In the first place, I am referring to 20 years old events, that will account for the lack of precision of certain details like exact location and soforth.

The sighting took place in an area situated between 20° and 28° long. East and 0° and 4° Lat. North. The country was rather marshy, pools of mud divided by narrow stretches of dry land. It was a vast clearing, approximately 1 mile diameter. The vegetation was tall elephant grass, reeds and Papyruss. The surroundings of the clearing was the tropical rain forest; trees about 90 feet high. Time 13:00 H Date July 1963.

I first came across the spoor, in a muddy spot. It was formed by, in the center a kind of depression or farrow between 3 and 6 feet wide, similar in shape to the one one would make by dragging a bag of coal in the sand. On each side of it were footprints, 2 to 3 feet wide by 3 to 4 feet long, eggshaped with the broad side towards the front. Imprinted deeper into the mud was the mark of five ribs or fingers aproximately 3 inches wide, starting from a common centre at the back of the print, diverging towards the front and sides. The space between the fingers was also imprinted with something softer, the ground was raising slightly. I would compare it to the diaphragm between the claws of a duck- The footprints were between 3 and 5 feet on each side of the belly mark, and the marks of the rear feet were overlapping the ones of the front one. The tall shrubs witch were on the spoor were crushed like with a bulldozer.

At the sight, my trackers stopped abruptly and refused to let us go farther. Considering the size of the animal and the gauge of our guns, my friend and I decided to retreat—

On our way back, the trackers showed to us on the other side of the clearing the animal. However, at about 1 mile distance and with the haze it was not very clear A huge greyish mass, towering well above the grass. I estimate from 20 to 40 feet high. A long flexible neck about the size of a tree trunk and $\pm$ 30 feet long. A very small head held at a right angle from the neck. I had a camera with me, and i did not take a photo—in the first place because I never tought about it, in the second place because at this distance and with the haze, it never works.

The friend who was hunting with me, Lem Bauer, has been killed by the Simbas, the local terrorists, fifteen years ago—

An other friend of mine have seen similar spoor in the same area, in 1957,58-his name is GUY DE LA RUWIÈRE and he lives in

Provence (south of France) You will be able to obtain his exact address from his aunt- JEANNE DE LA RUWIERE 247 AV. PAUL DESCHANDEL BRUXELLES. Phone 215 8244.

May I add that if this animal is traveling at only half the speed of an oliphant, in twenty years time it may have moved a few thousand kilometers.

I heard that you planned to cage the animal and bring it to Brazzaville Zoo. I doubt that you will even be able to build locally a cage big and strong enough. And i wonder what kind of vehicle you are going to use to transport it.

The best solution seems to be; Tame the dinosaur and bring it to Brazzaville under its own steam—

Anyway, i wish you good luck in your discovery trip. I hope to hear about you very soon, very selfishly because i will be able to convince some of my friends that i am not a lunatic.

Yours sincerely,

J. M. Lefebvre
J. M. LEFEBVRE
36 HANS STRIJDOM AV.
LYTTELTON 140
REP. OF SOUTH AFRICA”

Time did not permit me to contact Lefebvre’s friend prior to my second expedition. However, in December of 1982 I wrote to Bernard Heuvelmans, sending him a copy of Lefebvre’s letter and asking that he check out Guy De La Ruwiere in the south of France. In due course, Bernard contacted M. De La Ruwiere and received his report. An English translation of this report is reproduced under Appendix G. The animal described appears to resemble some of the other strange creatures reported to us more than it does the Mokele-mbembe. It could easily be the *Ngumamonene* described in chapter 19.

The last report comes from Jorgen Birket-Smith of the Institute of Comparative Anatomy, University of Copenhagen, dated 14 August 1981, Denmark:

“Dear Sir.

I have recently (from the Danish broadcast) learnt about your proposed expedition to the Congo to hunt down a surviving ‘Bron-

tosaurus', or whatever it might be. I assume you are familiar with all the many published records of this legendary animal from various parts of Africa under as many different names, even if the descriptions seem to be very similar.

I shall, however contribute still another, personal, not published record.

As you must have realized by now to believe in such a creature is to make yourself the laughing stock among all 'learned' zoologists. You may recall Ivan T. Sanderson and what happened to him when he published his meeting with the giant bat by Mamfe in the (then) British Cameroons. It did not help him that somebody cried out about a *Pterydactylos*. Only the inhabitants of Mamfe believed him, as they believe in that giant bat—many have actually seen it—and the most learned inhabitant I have met there, a school teacher, who had seen it also believed, as did Sanderson, that it was a giant bat. This is partly the reason, why the following records have not been published. Another is, that no editor would dare to publish any new records of even more fantastic animals. All 'learned' zoologists know that they know all larger animals living to-day and the editors are—quite justified—afraid no 'real' zoologist will publish in their journals after such a paper. Only the local people, who are not hampered by too much learning believe in these creatures.

During the winter 1949-50 I stayed in the (then) French Cameroons in the rain forest area by River Nyong, in a place called 'Case du Nyong' belonging to the Service des eaux et forêts (3°30'N, 11°10'E). One day in mid-February when passing along a path following a water shed along the crest of a ridge in the primary forest, suddenly a giant lizard jumped up 2-3 metres in front of me and rushed into the undergrowth. Its length from snout to the root of the tail was at least one metre and the diameter of the middle of the body 30 cm. Its colour was uniformly light sand-coloured. Its tail may have been 1.5 to 2 m. Even if it passed across the path in full view about 5 m in front of me, I dare not give a more exact estimate. Personally I think it was an as yet unknown *Varanus*. Nile-monitors (*Varanus niloticus*) were quite common along the river, where they used to rest on branches overhanging the water. But partly these were far more slender of build, and even when dry, they were never of the same uniform, light colour. Further, I have never, neither in the Cameroons, nor anywhere else met nile-monitors so far from water.

I mentioned this animal for partly by 'hunting-boy,' Jerome, an elderly chap, who must have been borne about the turn of the century, as he had done German military service and still spoke some German, and partly to a Gaurd de forêt, who lived nearby. They both know this animal and described it as 'Très bon mangé' in contrast to the nile-monitors, which they did not like.

From the above conversation my curiosity was aroused, and I continued to ask about all the animals they knew. Here I should add that they both originated from the savannah area north of Yaoundé (the town), the original area of the Yaoundé-tribe, actually they both originated from the same area. However, where this was, was rather difficult to find out. An examination of Jerome's old, German soldier-papers (which he kept as a reliquie) indicated a place on the River Sanaga above Nachtigal, about $4^{\circ}30'N$, $12^{\circ}0'E$, a place called Etoa Eboko.

They both knew a big animal living in the river (Sanaga) which they called 'Nwe'. I drew a hippo. Yes, they knew that one, but that lived in Nyong by Mbalmayo, which was quite correct. I then drew a crocodile. Yes, but they were in Nyong just by the house and not very big. I explained, that they could be many metres long, and they agreed, for in Sanaga they had seen such big ones. They then explained that the Nwe had a long neck, and I drew a giraf. That one they also knew, but that one never swam in the river, and one should far up north to find it. Since I knew many of the older records of a 'Brontosaurus', that should live in Africa, I drew one. They immediately both agreed that this was like a Nwe.

Having arrived that far, I began to pump them for all they knew about the Nwe. It was very rare, or at least very rarely seen. However, the guard remembered, that when he was a boy—which must have been some time in the twenties—they had caught one in his village. Its size was between that of a hippo and an elephant. The whole village had eaten from it in a full week. (Must have had a nice odour after some days!—but that is of no account to most Africans.) If we estimate the village to have 200 souls (adults) and their appetite for meat taken into consideration, they probably devoured slightly more than 400 kg per day, which gives a total of about 3000 kg meat. The live weight of the animal must then have been about 4,000 kg, or as they both said, the size between a hippo and an elephant. Of the habits of the Nwe they could not tell much, only one interesting thing, viz., it ate from the trees, by which they meant the trees in the gallery forest leaning over the water or turned over into the water. It hardly ever came on dry land. This last bit of information agrees very nicely with the views presented by E. H. Colbert in 1952 (*Ann. Mag. Nat. Hist.* 12(5):708-710), on 'Breathing habits of sauropsid dinosaurs.' It is supposed to browse mainly at night, and if it stays submerged during daytime, only with its nostrils, possibly on dorsal protrusion on its head, it might be extremely difficult to observe.

This Sanaga record (for what it is worth) may be the northernmost one, maybe with exception of the White Nile (acc. Willy Ley), from which no recent records exist. (And, naturally, Loch Ness!!!), as

Lake Bangweolo is the southernmost one.
Wishing you good hunting I remain

Yours sincerely

Jorgen Birket-Smith

P.S. I have never, in spite of all prying, met with similar tales from the Niger-Benue system.”

This last letter, although not an eyewitness account, does provide an independent description of a creature similar in most respects to the Mokele-mbembe.

Returning now to the early twentieth-century newspaper reports, I found that by 1911 the “African Dinosaur” business was spreading like some infectious disease. The following year the *New York Herald* for Sunday, 11 January 1911, carried an article entitled “Prehistoric Monsters in Jungles of the Amazon”. Now South America was involved, too! It may seem strange to evaluate South American evidence in the midst of an examination of anecdotal evidence about the possible survival of an unknown animal species in Africa but such information proves to be important.

From a cryptozoological viewpoint, the most disturbing possible explanation of reports of strange creatures by primitive peoples is that they may be referring to a myth or religious construction which has nothing to do with real animals. However, if the reports come from individuals having different religious, ethnic, cultural, and geographical backgrounds and if they agree in descriptive detail, the possibility that real animals are the basis for the reports increases greatly. Further, if similar reports come from other geographical areas, remote from the area of investigation—that is, from another continent such as South America, which was attached to Africa during the Triassic and possibly even until the beginning of the Jurassic period some 100 millions years ago—the cultural-myth or religious-construction explanation virtually disappears. The two reports that follow, assuming some credence can be placed on them, do just that. They contributed greatly to my willingness to consider the possibility, however improbable, of sauropod dinosaur-like animals surviving to the present day.

The article in the *New York Herald* reviews a variety of reports of strange animals quite accurately and goes on with the personal experience of the author of the article, a German by the name of Franz Herrmann Schmidt. According to the article, Schmidt set out from Bogota, Colombia, with a companion, Captain Rudolph Pfleng, on 8 October 1907. Schmidt describes their journey through the swamps and jungles quite convincingly, culminating with an alleged encounter with a large, unknown animal. He names real rivers, real places, and gives the coordinates of the encounter site as 5°30' South latitude and 75°5' West longitude, stating that the best way to reach the area is up the Solimoes River. The description of the encounter makes an exciting narrative. Unfortunately, Schmidt's report could never be checked because according to Schmidt himself, his companion, Pfleng, died of fever on 4 March 1908, in Rosario. The most relevant part of Schmidt's narrative follows:

"The twelfth day we descended into a long valley with a spot about three miles wide and nine or ten miles long in the centre that showed many spaces of open water a hundred yards wide or more. It was a shallow lake literally choked with vegetation. Following the stream down we found that near the head of the lake the influx was augmented by some huge gushing hot springs with a sickening odor and a worse taste. Even in a land of extravagant vegetation, that around the head of the lakes was the most extraordinary I have ever seen, and I believe that the water from the springs had something to do with it.

The valley was like any other of many we had crossed, and we should merely have detoured the swamp if Pfleng, surveying it with his glasses, had not noticed in two or three spots on the shores of the lakes some huge swaths or crushed tracks such as the Indians had mentioned. We could not inspect these from solid ground.

The only way we could get at them was from the water, so we cut a tree, made a rude dugout, shaped up some paddles and the second day set it afloat in the open water at the head of the lake. One thing we noticed at once. There was not an alligator, iguana or even a large water snake to be seen anywhere. This in itself was queer. The swamps were full of floating islands where a tree or a big branch had fallen in, gathered a lot of water plants around it and gradually formed a structure on which even small trees grew.

We had to steer in and out among these, often cutting a path for the dugout through masses of entwining plants on the top of the water.

One of the Indians leaning over the bow would keep the machete swinging as we drove the dugout slowly forward with the paddles. At last we got into a pool of open water from which one of the swaths led shoreward, and we put the boat right up into it.

There was no question but what it had been made by some enormous body being dragged from the water through the plants and mud until solid ground was reached, where a great circular wallow in a sunny spot was made. On the plants nearby were marks of waves two feet above mean level on the average, and great flaglike stocks as thick as my leg were broken off short in the track and the tops mashed into the mud, while the movement of the body had carried quantities of the soft ooze from below the water and spread it like plaster on the crushed plants.

A very large elephant or hippopotamus could have made a similar track. In making the return journey to the water practically another course had been chosen, the point of entrance being some hundred feet to the east, and a little shelving back there having been crushed in with the small trees that grew on it, in a way that showed that many tons of weight must have rested on it. The creature that had been able to make marks like these in the course of a peaceful progress must be a terrible thing if aroused to anger.

The Indians in the dugout grew more and more frightened, and I confess that I began to watch the water and listen for movements along the shore or among the islands with feelings slightly more tinged with anxiety than I had felt before I saw these evidences.

Leaving this spot we proceeded slowly along and soon came to an island which was evidently a favorite sunning spot, as the plants were crushed down all over it and it was plastered with mud dragged up from the bottom. It took much time to get ahead any and it was very late in the day before we crossed one bayou about a half mile wide to examine some similar spots on the further shore. Here we found three spots where some amphibious animal had left the water and returned to it. One was very large and the other two only about half the size.

Plainly there was more than one such creature in the lake. Another thing which we had not observed previously was that vast quantities of fronds, tender green leaves and broad stretches of flag growth had been ripped off. I have seen spots in which a herd of elephants has fed, and these looked very similar. One tree had a smear of mud on it fully fourteen feet from the ground.

ENCOUNTER WITH BULLET PROOF MONSTER

Now we hastened back, following the same track we had cut, and twice we stopped paddling to listen as both Pfleng and I were sure

that we heard heavy splashing behind the islands to the east. The Indians were for leaving at once, and in their talk among themselves that evening it was easy to see that they were discussing the matter of remaining longer in such a dangerous region. They were badly frightened. We mounted a guard that night for the first time in weeks, Pfleng and I taking turns with an Indian each. I believe that our men would have deserted us if we had both slept.

After breakfast we set out again in the dugout, taking our heavy caliber Remingtons with us and a good supply of ammunition. Taking the southern shore we traversed the stretch that seemed to be most affected by the waters from the hot springs, and shortly before noon began to find more wallows as the ground along shore grew firmer. At last we came to one large one which had been used for leaving and entering the water, or else the animal was still on shore. We approached very carefully and a thrill shot through me as I saw that the mud on the weeds and water plants was still dripping. We were close to our quarry.

With every precaution, the paddles making no noise at all, we advanced to the water line. To have left the boat would have meant going in the mud to our waists, perhaps, and yet we could see nothing but green stuff from where we were. We argued the question in a whisper and Pfleng had just announced his determination to follow the track inland if it was the very last act of his life, when a troop of monkeys was heard approaching, gathering some great blue-black berries from small trees that grew in the mud. We had just made them out when there was a sudden outcry among them, a large dark something half hidden among the branches shot up among them and there was a great commotion.

One of the excited Indians began to paddle the boat away from the shore, and before we could stop him we were one hundred feet from the waterline. Now we could see nothing and the Indians absolutely refused to put in again, while neither Pfleng nor myself cared to lay down our rifles to paddle. There was a great moving of plants and a sound like heavy slaps of a great paddle, mingled with the cries of some of the monkeys moving rapidly away from the lake. One or two that were hurt or held fast were shrieking close at hand, then their cries ceased. For a full ten minutes there was silence, then the green growth began to stir again, and coming back to the lake we beheld the frightful monster that I shall now describe.

The head appeared over bushes ten feet tall. It was about the size of a beer keg and was shaped like that of a tapir, as if the snout was used for pulling things or taking hold of them. The eyes were small and dull and set in like those of an alligator. Despite the half dried mud we could see that the neck, which was very snakelike, only thicker in proportion, was rough knotted like an alligator's side rather than his back.

Evidently the animal saw nothing odd in us, if he noticed us, and advanced till he was not more than one hundred and fifty feet away. We could see part of the body, which I should judge to have been eight or nine feet thick at the shoulders, if that word may be used, since there were no fore legs, only some great heavy clawed flippers. The surface was like that of the neck. For a wonder the Indians did not bolt, but they seemed fascinated.

As far as I was concerned, I would have waited a little longer, but Pfleng threw up his rifle and let drive at the head. I am sure that he struck between the eyes and that the bullet must have struck something bony, horny or very tough, for it cut twigs from a tree higher up and further on after it glanced. I shot as Pfleng shot again and aimed for the base of the neck.

The animal had remained perfectly still till now. It dropped its nose to the spot at which I had aimed and seemed to bite at it, but there was not blood or any sign of real hurt. As quickly as we could fire we pumped seven shots into it, and I believe all struck. They seemed to annoy the creature but not to work any injury. Suddenly it plunged forward in a silly clumsy fashion. The Indians nearly upset the dugout getting away, and both Pfleng and I missed the sight as it entered the water. I was very anxious to see its hind legs, if it had any. I looked again only in time to see the last of it leave the land—a heavy blunt tail with rough horny lumps. The head was visible still, though the body was hidden by the splash. From the instant's opportunity I should say that the creature was thirty-five feet long, with at least twelve of this devoted to head and neck.

THE FLIGHT

In three seconds there was nothing to be seen except the waves of the muddy water, the movements of the waterside growth and a monkey with its hind parts useless hauling himself up a tree top. As the Indians paddled frantically away I put a bullet through the poor thing to let it out of its misery. We had not gone a hundred yards before Pfleng called to me and pointed to the right. Above the water an eighth of a mile away appeared the head and neck of the monster. It must have dived and gone right under us. After a few seconds gaze it began to swim toward us, and as our bullets seemed to have no effect we took flight in earnest. Losing sight of it behind an island, we did not pick it up again and were just as well pleased.

Since it was apparent that our Remingtons, heavy enough to drop a lion or an elephant in its tracks were no defense at all against such animals as we had seen, and from the tracks we had reason to suppose there were larger ones in the region, the wisest thing for us to do was to be content, move on as soon as possible, and return with a rapid fire gun or something like that."

The narrative continues, briefly describing the return and meeting with some white railroad workers on the Madeira who were politely skeptical about what they were told.

What are we to make of this story? The details, in spite of the Sunday supplement aspect, seem to ring true and probably reflect the experiences of an actual expedition. It does not necessarily follow that the encounter with the alleged creature also occurred and may be nothing more than a clever addition to an otherwise authentic expedition. On the other hand I have not turned up any evidence to reflect on Herr Schmidt one way or the other. A check of the Schmidt entries in the German Encyclopedia *Der Grosse Brockhaus*, vol. 16, 1934 edition, listed no Franz Herrmann Schmidt. All of which proves nothing except that the man was not prominent enough to be included in an encyclopedia, assuming that the writer was using his real name.

Although a degree of open-minded skepticism is in order with regard to this report, largely because we have no way to judge the reliability of the reporter, fortunately we have corroborative, anecdotal evidence from Lt. Col. Percy H. Fawcett, perhaps the greatest South American explorer of all time, whom I regard as completely reliable.

Fawcett originally served in the Royal Artillery of the British army but had, in addition to his military skills, acquired the necessary training for boundary-survey work. The president of the Royal Geographical Society was aware of Fawcett's talents and interest, and after discussing the matter with Fawcett, recommended him for a post as a boundary surveyor. Thus began Fawcett's nineteen-year career of measuring and surveying the trackless jungles of South America. Actually, this activity amounted to exploration and permitted Fawcett to pursue his search for lost cities and peoples, until he disappeared in the Mato Grosso jungle in 1925, which is another story in itself.

During his years of exploration, Fawcett recorded most of what he experienced and observed which, in many cases, included references to animals, known and unknown. The passages relevant to our story refer to the region around the River Acre, a tributary

of the River Purus, which, in turn, flows into the Amazon, and to River Madidi, another tributary of the upper Amazon somewhat to the south, which represents parts of Brazil and Bolivia. These passages refer to alleged currently existing behemoths, similar to the African *Mokele-mbembe*.

Fawcett wrote:

“The Indians report the tracks of some gigantic animal in the swamps bordering the river, but allege that it has never been seen. The shark exists beyond doubt [referring to another Fawcett report of a freshwater shark in the Paraguay River]; as for the other monsters—well, there are queer things yet to be disclosed in this continent of mystery, and if strange unclassified insects, reptiles and small mammals can still exist there, mightn’t there be a few giant monsters, remnants of an extinct species, still living out their lives in the security of the last unexplored swamp areas? In the Madidi, in Bolivia, enormous tracks have been found, and Indians there talk of a huge creature described at times half submerged in the swamps.”

Later, while writing about his work on the Peruvian-Bolivian boundary, Fawcett again refers to the strange beasts of the Madidi:

“In the forests were various beasts still unfamiliar to zoologists, such as mitla, which I have seen twice, a black doglike cat about the size of a foxhound [most probably the Brazilian bush dog, *Icticyon venaticus*]. There were snakes and insects yet unknown to scientists; and in the forests of the Madidi some mysterious and enormous beast has frequently been disturbed in the swamps—possibly a primeval monster like those reported in other parts of the continent. Certainly tracks have been found belonging to no known animal—huge tracks, far greater than could have been made by any species we know.”

Assuming we can accept one or both of these South American reports, the probability of some kind of surviving sauropod in Africa increases significantly.

For better or for worse, this is the evidence we need to consider in our investigation of our unsolved African zoological mystery.

16

Mokele-mbembe: What could it be?

No living specimen has ever existed in any zoo, yet most westerners can easily conjure up an image of the fearsome creatures we call “dinosaurs.” Strange, ancient, mighty—the animals exert a peculiar fascination on us—and yet our conception of them is built on fossil evidence alone.

Because no fossil remains of these creatures are known later than the Cretaceous period, traditional science concludes there can be no living dinosaurs. But the coelacanth is the most obvious and well-known exception to the dictum, “No post-Cretaceous fossils, no living representatives.” Although the idea of a living dinosaur may be mind boggling, the existence of one is not beyond the realm of possibility.

There are animals alive today that are related to dinosaurs and have survived from the Cretaceous—and even earlier horizons—virtually unchanged. The crocodilians and the animal known as *Sphenodon punctatus*, called tuatara by the Maori of New Zealand because of the spiny crest on its back, are the best examples. The crocodiles are carnivorous, semi-aquatic reptiles that evolved from dinosaur ancestors known as Thecodonts (the same line from which birds also evolved). The origin of crocodiles dates back to the middle of the Triassic, and by the time of the Cretaceous they were well established in their present form. As we all know they are still with us today, very much alive and well.

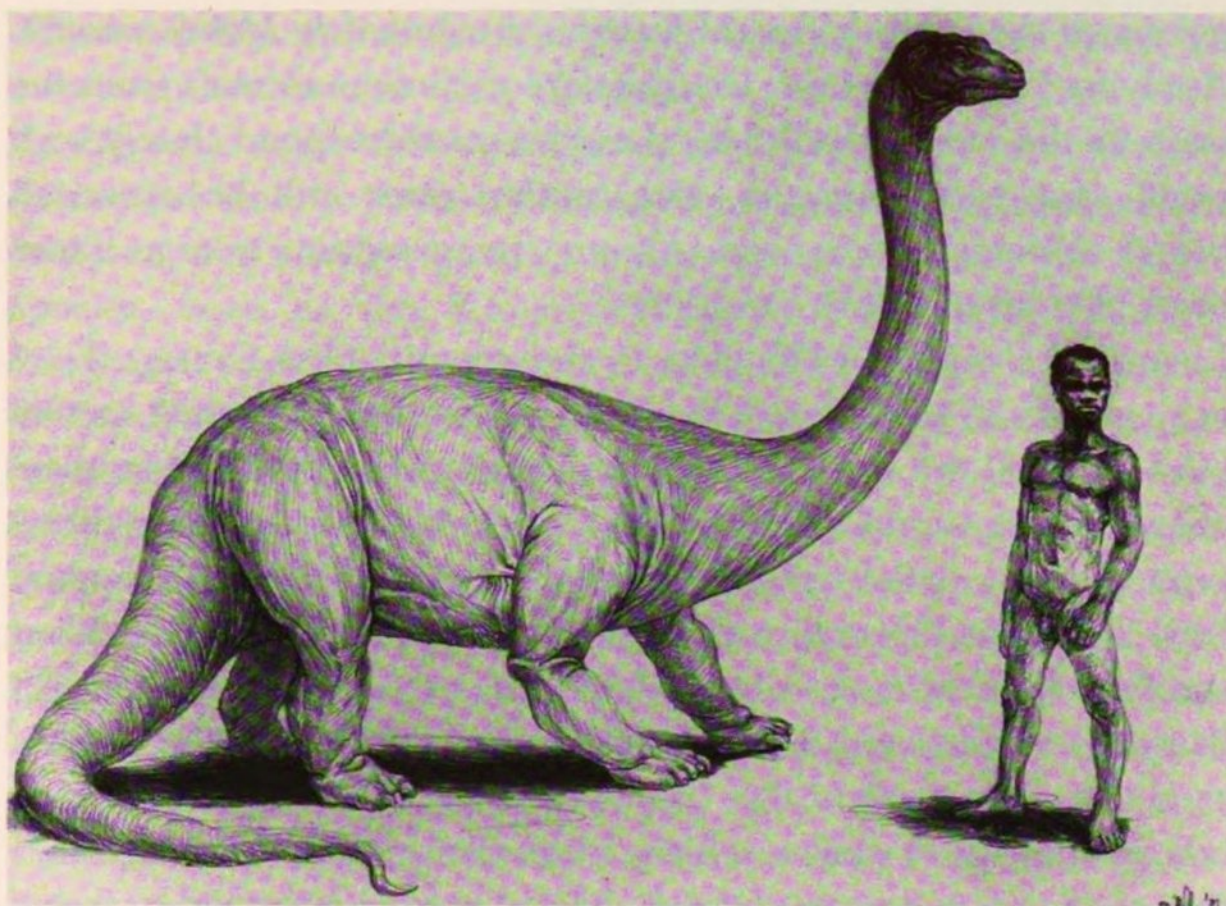
Why should our minds boggle at the idea of dinosaur survivors from 65 million years past when the tuatara is even more ancient, arising in the Carboniferous from the ancestral stock that also spawned lizards and snakes? This creature is 65 centimetres (2 feet) in length and truly deserves the name “living fossil,” as it has survived without appreciable modification for approximately 200

million years. Furthermore, the tuatara exists only in one place in the world, New Zealand, so why not a small dinosaur in the inhospitable, unexplored jungle swamps of the Congo?

Despite the several dozen hypotheses of dinosaur extinction the fact remains that the crocodilians in the swamp survived. That being the case, why not also the Mokele-mbembe? It, too, is semi-aquatic, differing behaviourally from the crocodile only in that it is an herbivore. We gathered more than thirty detailed descriptions of the Mokele-mbembe and these fit the configuration of a small sauropod so well that I find it impossible not to accept the identification, at least tentatively. Each of the reports was a first-hand, eyewitness account by informants from widely differing ethnic, cultural, religious, and geographical backgrounds.

Without exception, every one of the eyewitness informants identified pictures of sauropod dinosaurs as representing the Mokele-mbembe. A few made drawings of the creature in the sand or dirt and these, too, seemed rather good depictions of a sauropod dinosaur. Our informants made their drawings prior to being shown any pictures whatsoever; in no case were they copying them from our picture books.

The animal is said to range in length from 5 to 10 metres (15 to 30 feet), much of which it owes to the long head-neck and tail. Colour varies somewhat, being grey to brown, with reddish-brown predominating. Some representatives possess a frill on the back of the head, and others do not. The frill is frequently compared to a cock's comb by those familiar with chickens. No hair of any kind is in evidence and the head is described as very much like that of a snake, but much larger even than the biggest python. The legs are short, with three claws conspicuously visible on the hind legs. The size of the animal's body was compared with that of an elephant or hippopotamus. Footprints were described as rounded, about 30 centimetres (1 foot) in diameter—something like those made by an elephant. When observed in sand, claw marks were also present. No sound or call is attributed to the Mokele-mbembe, in contrast to the descriptions given to us of the other unidentified animals, which often included calls or cries.



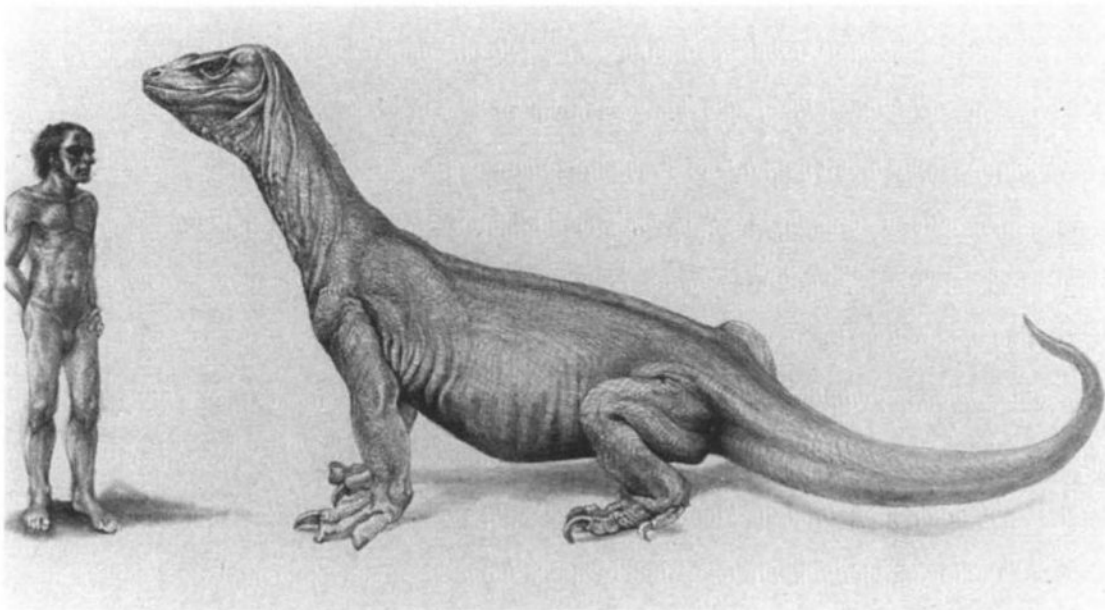
42. Drawing of the *Mokele-mbembe* based on the concept that it might be a small sauropod dinosaur.

None of our informants suggested that the Mokele-mbembe had a large tooth or horn. When questioned along these lines they simply stated there was no horn or that it was the Emela-ntouka (see chapter 17) that had the horn, not Mokele-mbembe. Some of them stated that the animal ate the malombo plant fruit, raising its long head-neck out of the water along the riverbank in order to pluck the fruits from the high hanging vines. Although the Mokele-mbembe is an herbivore it is dangerous. It will surface from under a dugout, overturning the boat and spilling the occupants into the water. It kills the occupants by biting and tail lashing, but it does not eat them. Early morning and late afternoon sightings are the more common, but the animal is seen at other times of the day as well. A few night observations have also been reported.

These descriptions pose a fascinating zoological mystery. There are two reasonable possibilities: the animal is either a reptile or a mammal. No known mammal—either living or extinct—has ever

possessed the combination of features attributed to *Mokele-mbembe*. Applying Occam's razor, we therefore exclude mammals from the start. In the case of reptiles the descriptions correspond closely with small sauropod dinosaurs, but caution must still be exercised before drawing conclusions. Among living reptiles a large lizard must also be seriously considered.

Lizards are reptiles belonging to the group called Sauria. They vary greatly in size, from a few centimetres to more than 4 metres (15 feet), and are widely distributed in the temperate and tropical zones of the world. They include tree-dwellers, land-dwellers, semi-aquatic, and burrowing types. Most have four functional legs. The basic foot structure consists of five toes with claws. Most species are meat eaters, but a few feed on vegetable matter. All lizards have scales of one type or another and must, like snakes, shed their skin periodically. The eyes are well developed and have lids, in contrast to snakes, which do not. Some have forked tongues that are used as organs of smell. Most lizards have good hearing, although few produce sounds. Lizards are egg layers although a few do give birth to live young.



43. Drawing of the *Mokele-mbembe* based on the concept that it might be a large, longnecked monitor lizard.

These reptiles are an ancient group, having separated from the stem reptiles in the early Permian or even in the late Carboniferous, some 300 million years ago. They are directly descended from a group of lizard-like animals called Eosuchians and are not closely related to dinosaurs, although the larger species, such as the Komodo dragon of Komodo Island in Indonesia, certainly do look very much like prehistoric monsters. The skull is of a diapsid type, although simplified. (Diapsid means possessing two holes in the skull behind each eye socket.) One very early reptile type of the later Permian had a configuration that comes closer to our descriptions of the Mokele-mbembe than later, more modern lizards. This animal, known as *Protocosaurus*, had quite a long head-neck and tail and is believed by some paleontologists to be a diapsid type. This animal was about 1 metre (3 feet) long. From this we can infer that the configuration of a long, slender neck and tail attached to a heavier body is not alien to the lizard group, at least during the earlier stages of the evolution of the group.

But what about modern living lizards? No single species of any known lizards conforms to all the characteristics attributed to the Mokele-mbembe. However, among iguanas and monitors, the two groups that encompass the longest and heaviest species, one does find most of the required characteristics. Iguanas are now found in the New World, Madagascar, Fiji, and the Tonga Islands in the Pacific, but not in Africa. This present known distribution need not greatly concern us because the consensus among zoologists is that their range also included Africa in the past. Many species of iguanas have spiny serrated ridges and frills along the back and head in a variety of configurations. The head-neck is not nearly so long and slender as in the case of the monitor. In this respect the monitor comes closer to our "mystery animal". Both groups have semi-aquatic representatives and quite a few prefer a habitat associated with rivers. Both groups can produce vicious bites and the slap from the tail of a large monitor has the impact of a baseball bat. Such action by a 9-metre (30-foot) specimen could well be fatal to a human being. No known monitors are plant eaters, but a few iguanas are.

The body of no known lizard corresponds very well with the heavy body supported by elephant-like legs with three claws allegedly possessed by the Mokele-mbembe. It could be argued that a very large and heavy lizard, to support the great weight, might have two of the five-clawed toes reduced to make a more hooflike configuration. Even the longer, slender neck of some monitors does not quite fit in with the long, thin, snake-like head-neck attributed to the Mokele-mbembe. Nevertheless, this combination of physical features is exactly what the Africans have in mind. Some even make the connection with lizards. This kind of description is succinctly recorded by Captain William Hichens in his 1937 article in *Discovery*, entitled "African Mystery Beasts".

"Colossal Lizards

The largest, most frightful, and least credible of all African mystery beasts is the *mbilintu*. Its very name means 'the frightful unknown monster,' and it is said to be an enormous elephant-hippo-like beast which haunts the *Congo swamps* and the regions of lakes Bengweulu, Mweru and Tanganyika. Native accounts of it vary widely. From some, it might be a chalicothere, that remarkable beast of the late Miocene period, with a horse-like head, and toed, clawed 'hoofs,' a horse-cum-sloth creature in appearance. *Other accounts speak of a gigantic lizard, with a neck like a giraffe, legs like an elephant's, a small snake-like head and a tail thirty feet long.* Several white hunters have asserted that they have tracked what must be such beasts, and the Smithsonian Institution, some years ago sent an expedition to locate this animal, but the project, unfortunately, met with disaster and never arrived in the field of search. Likewise, the Chief Lewanika reported years ago to the British Resident in Zululand that a *huge lizard, ten times as big as a crocodile*, which has made a trail in the reeds like that of a large trek-wagon from which the wheels had been removed (he meant made by something large dragged along, and the size of what to him was the familiar Boer veld wagon), and that he had given strict orders to his warriors to keep watch for the beast that he might see it for himself; but it was never seen again. The natives still talk of this monster under the name *isiquumadevu*."

Also of interest is a passage from Millais's *Far Away up the Nile* (1924):

"For instance, the late King Lewanika, who was much interested in the study of the animals of his kingdom, Barotsland, frequently

heard from his people of some great aquatic reptile, possessing a body larger than that of an elephant, and which lived in the great swamps near his town. He therefore gave strict orders that the next time one was seen he should be told, and he would at once go himself and visit the place. In the following year three men rushed into his court house one day in a great state of excitement, and said they had just seen the monster lying on the edge of the marsh, and that on viewing them it had retreated on its belly, and slid into the deep water. The beast was said to be of colossal size, with legs like a *gigantic* lizard, and possessing a *long neck*. It was said to be taller than a man, and had a head like a *snake*.

Lewanika at once rode to the spot and saw a large space where the reeds had been flattened down, and a broad path, with water flowing into the recently disturbed mud, made to the water's edge. He described the channel made by the body of the supposed monster to Colonel Hardinge, the British Resident, 'as large as a full-sized wagon from which the wheels had been removed'."

Thirteen years separate these two accounts of the same episode. The wording is not identical, and Hichens's report is the briefer, yet the two writers are in substantial agreement. Whether or not Millais received this information directly from Chief Lewanika, we do not know. In the brief report of Hichens, information not present in the Millais report, that is, the name of the creature, "*isiqu-qumadevu*," suggests that the information was received independently. Because both Millais and Hichens were actually in Africa the conjecture is not unlikely.

From this example, we see that anecdotes may be fairly accurate and may provide valuable information when the informants are reliable. Still, it is well to keep in mind a cautious reminder from Millais: "We are well aware...of the total inability of the average man and woman to observe anything correctly".

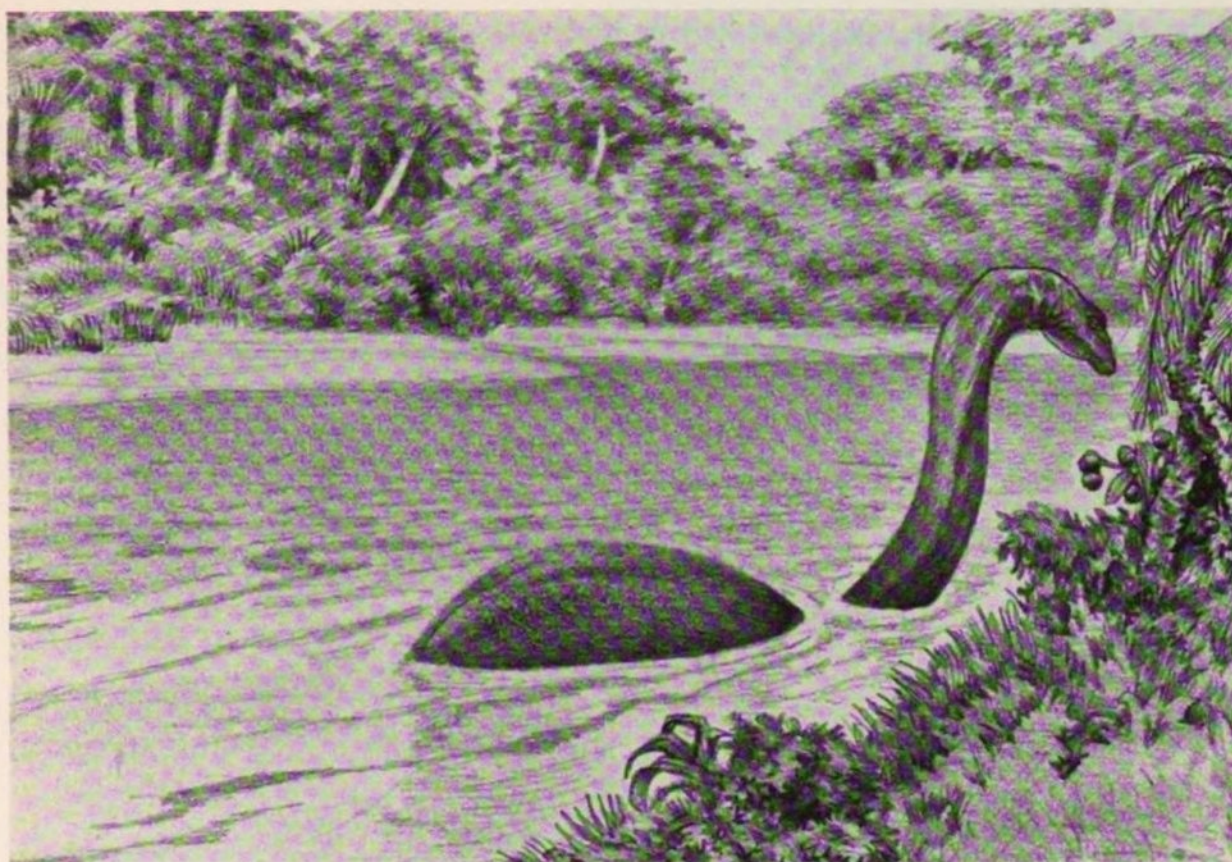
Few animals, either living or extinct, possess the unusual feature of having both a very long neck and tail. In making an extensive search throughout the animal kingdom for a tentative identification of the Mokele-mbembe my comparisons focused on that feature. A second important criterion was that the animal must be quadrupedal; that is, it must normally walk on all-fours. In addition to the lizard, among the dinosaurs that might have fitted the

bill, several were bipedal (walked on two legs only), and so had to be excluded.

Dinosaurs are perhaps the most spectacular of reptiles. They evolved from thecodont ancestors in the Triassic approximately 200 million years ago and were dominant throughout the Jurassic and Cretaceous. Their great size and variety make them valuable in the study of evolution. They vanished over a period of 100,000 to 400,000 years at the end of the Cretaceous. From a geological perspective this represents a sudden disappearance for creatures which had been lords of the earth for more than 100 million years. Volumes have been written and speculation seems endless as to why dinosaurs became extinct. At least forty hypotheses have been suggested, but none is yet fully accepted. It is curious that crocodiles, which arose at the same time in the Triassic and are closely related, survive to this day. Whatever it was that destroyed the dinosaur did not affect the crocodile. And that is a perplexing zoological mystery in its own right. Except for birds, crocodiles are the closest living relatives of the prehistoric dinosaur.

In studying the roster of extinct reptiles, particularly dinosaurs, the correspondence of the description of the *Mokele-mbembe* with a small sauropod is both immediately apparent and remarkable. The long, thin head-neck and powerful tail is a spectacular feature of this dinosaur group. Authorities are almost unanimous that the sauropods were herbivorous, which is consistent with reports that the *Mokele-mbembe* feeds on the malombo fruits. The length of extinct sauropods ranged from 3 metres (10 feet), in the case of a species called *Astrodon*, to *Brachiosaurus*, one recently discovered variety of which must have been longer than 30 metres (100 feet), lifting its head 12 metres (40 feet) from the ground. These sizes easily encompass the 5- to 10-metre (15- to 30-feet) lengths attributed to our mysterious Congo animals.

Many sauropods had three claws on the hind feet and one on each front foot, in agreement with the three-claw marks reported by some of our informants. This is not to say that the sauropod did not possess five digits; it is simply more correct to say that those forms which evolved heavier bodies developed legs and feet sturdy



44. Drawing based on eyewitness observers showing the *Mokele-mbembe* feeding on *malombo*.

enough to support the greater weight. Such an adaptation generally results in a more hooflike foot.

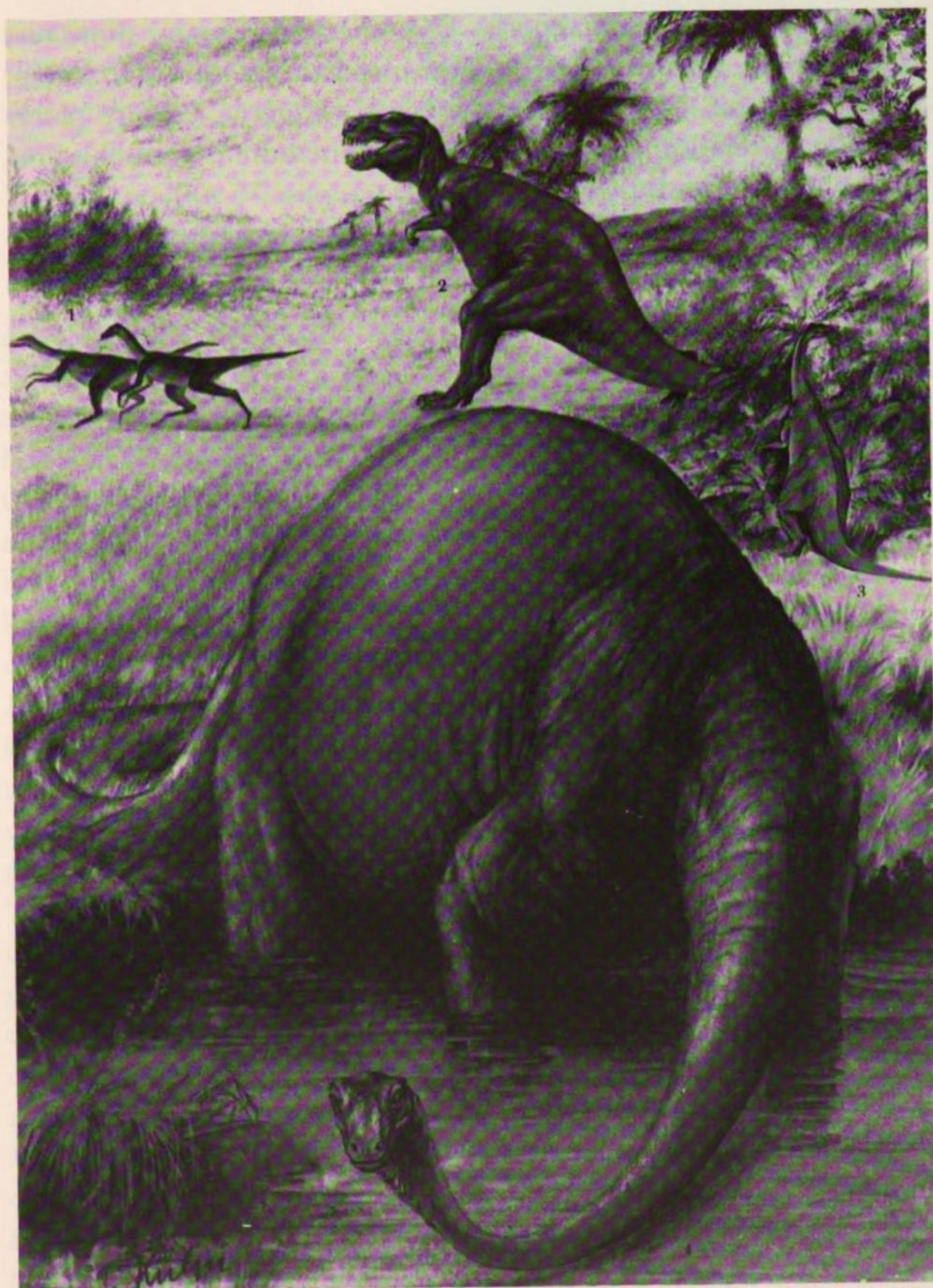
No one knows exactly what the skin of dinosaurs looked like, or for that matter, what colour patterns it may have developed. Modern depictions are based on conjecture and reasonable inference from living reptiles. It is probably safe to assume that many sauropods had skin resembling that of modern snakes and lizards. To a human observer small scales would resemble a relatively smooth, leatherlike skin except close up; and this is consistent with our eyewitness reports.

In most cases, dinosaurs probably laid eggs. Alternatively, some dinosaurs may have produced live young, as do a few lizards and snakes, which, under certain conditions, is advantageous. Our descriptive data also suggest that our Mokele-mbembe is able to hear; and some sounds have been ascribed to it, although I believe this results from a confusion with another animal, the *Emela-ntouka*, described in the next chapter.

For quite a while, no one knew if dinosaurs could hear sounds or make them. Except for crocodiles most modern reptiles do not. The reason for our lack of knowledge about dinosaur hearing is that the small bones associated with the inner ear are very delicate and rarely preserved as fossils. Fortunately, a skull of the *Corythosaurus* dinosaur has been discovered; the extremely delicate but well-developed bones of the middle ear are well preserved, thus establishing that at least some dinosaurs could hear very well. One cannot be sure about what kind of sounds, if any, were made by dinosaurs. Crocodiles, which are even more primitive than dinosaurs, have very loud voices indeed, especially during the mating season; and so it seems reasonable to suppose that some dinosaurs also made sounds. As the majority of our informants allege that the Mokele-mbembe makes no sound the matter is of little importance.

The thinness of the head-neck is somewhat of a problem, although much more so in the case of the lizard hypothesis. Here again the sauropod wins hands down over the lizard, as illustrated in the reconstruction of *Atlantasaurus*.

Another matter deserving attention is the controversial question of warm-bloodedness in dinosaurs. The count is not yet in on this matter, but the chief proponents of the theory of warm-bloodedness in dinosaurs, such as R. T. Bakker of the Museum of Comparative Zoology at Harvard University and Adrian J. Desmond, author of *The Hot Blooded Dinosaurs*, present a very good case. In our discussion the theory is relevant as an explanation of how Mokele-mbembe may have survived as a dinosaur species. Desmond points out that the terrestrial reptiles sharing the end of the Cretaceous with the dinosaurs would appear familiar to us today. Crocodiles, iguanas, and monitor lizards flourished, and snakes, although rare, were also in existence. Why did they survive, while the dinosaurs did not? Desmond answers that the surviving reptiles were cold-blooded, while dinosaurs were not. We need not pursue here Desmond's detailed hypothesis as to the extinction of dinosaurs. Let us note only that, if substantially correct, the theory accounts for the existence of a dinosaur Mokele-



45. Reconstruction of *Atlantosaurus*, an elephant foot dinosaur with a very long, thin neck similar to the description of the *Mokele-mbembe*.

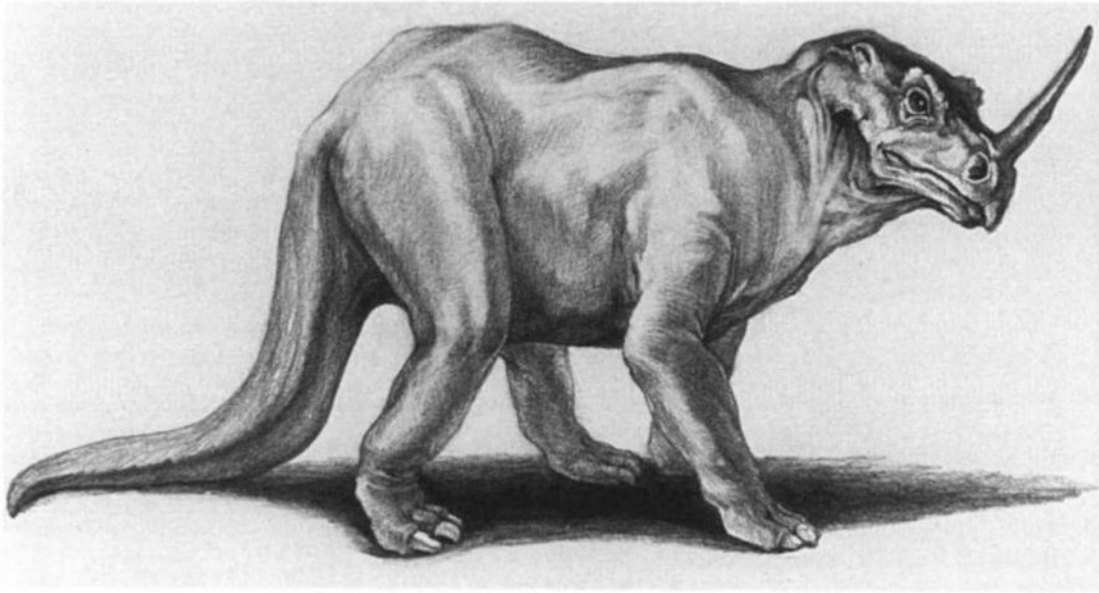
mbembe in the present epoch. Hypothetically, many dinosaurs (perhaps the majority) were warm-blooded. In an environment such as that of the Congo on the earth's equator, Nature places much less premium on warm-bloodedness in animals, and this area has changed very little climatically in the past 70 million years. I predict that if and when we obtain a Mokele-mbembe alive for study, and if the creature is indeed a surviving sauropod dinosaur, it will be cold-blooded. This result would not prove that dinosaurs in general were cold-blooded; it will prove only that, like the crocodile, the surviving dinosaur was cold-blooded.

The mystery beckons, but pending new information gleaned from future expeditions, our speculations must rest here.

Emela-ntouka: Killer of Elephants

Emela-ntouka is the second most frequently mentioned unidentified animal in the Likouala region. Two characteristics are uniquely ascribed to the creature, the most spectacular being the single, large, curving horn growing from the animal's head. Second, of all the strange animals described to us, it is the only one said to utter a sound. That sound was variously compared to a snort, howl, roar, rumble, or growl. Although these descriptions may seem imprecise, our informants were unanimous in crediting such sounds to the animal. The Bomitabas refer to the creature as *Emela-ntouka*, but it has various other names. The name *Aseka-moke* is also encountered here and there, and *Ngamba-namae* is yet another (but less often heard) name. Around Lake Tele the term used is *Emia-ntouka*. At times, the animal is also referred to generically as Mokele-mbembe.

The following general description of *Emela-ntouka* is based on dozens of individual reports from people of different ethnic, geographical, tribal, and cultural backgrounds. It is significant that these reports were internally consistent, without any major discrepancies. The animal's body, exclusive of the head-neck region, seems to resemble closely the Mokele-mbembe proper. *Emela-ntouka* is described as about the size of an elephant and often somewhat larger. Its legs are said to be heavy, supporting the body from beneath, rather than from the side, as in crocodiles and lizards. It is described as having a heavy tail like a crocodile, but my impression is that it is not as long as that of the Mokele-mbembe proper. The skin is described as brownish to grey, elephant-like, with no conspicuous scale texture, and definitely hairless. Informants report no frills or ridges along the neck.



46. Drawing of the *Emela-ntouka* based on information from pygmies and Congolese observers.

The head-neck is short with a single, conspicuous horn protruding from the front of the head. Occasionally this distinguishing feature is mistakenly attributed to the Mokele-mbembe proper, due to a confusion of the two animals.

The animal is semi-aquatic, coming out of the water at times to feed on vegetation such as the malombo and other leafy plants. This contrasts with the Mokele-mbembe proper, which was never reported to feed on any plant *except* the malombo. Perhaps the association of malombo with the diet of *Emela-ntouka* is yet another example of the confusion between it and the sauropod-like Mokele-mbembe. The *Emela-ntouka* is a foliage eater; and the consensus among our informants was that the animal feeds on a wide variety of leaves. The animal kills (but does not eat) elephants and buffaloes by tearing and puncturing them with its formidable horn. *Emela-ntouka* is sometimes referred to as the “water-elephant” or “killer of elephants”.

It is often difficult to disentangle reports of *Emela-ntouka* from those of other mysterious animals. The overall picture has been quite muddled by the fusing of at least two—and possibly five—different animals in some accounts. For example, in his book *The Lungfish*,

the Dodo, and the Unicorn, Willy Ley mentions an unknown animal called the river elephant. He reported that Schomburgk, just after capturing a live specimen of *Choeropsis* (the pygmy hippo) in 1913, was shown a piece of skin by a settler living near Lefini on the Congo River. The skin, which was thickly covered with red hair, had evidently belonged to a rather large mammal, and closely resembled the hide of an elephant. The settler described the animal as similar to an elephant in appearance and said that the native name might even be translated as "river elephant." (One would like to know what the native name for the animal was.) The many reports of a "river elephant" centred around the Lake Leopold region, but the hairy and elephant-like appearance hardly fits the morphological characteristics of Emela-ntouka.

Bernard Heuvelmans, in his *On the Track of Unknown Animals*, lists more than two dozen references to "forest rhinoceros" and to the "water elephant". These references are mixed, referring to a number of different animals, only some of which are relevant to our immediate subject. Lucien Blancou, chief game inspector for a time in French Equatorial Africa, collected a great deal of information about unknown animals between 1949 and 1953. The following is an English translation from Blancou, provided by Heuvelmans:

"The Africans in the north of the Kelle district, especially the pygmies, know a forest animal larger than a buffalo, almost as large as an elephant, but which is not a hippopotamus. Its tracks are only seen at long intervals, but they fear it more than any other dangerous animal. The sketch of its footprint which they drew for M. Millet is that of a rhinoceros. On the other hand, they do not seem to have said that it has a horn, though they have certainly not said that it has not. While M. Millet was at Kelle, in 1950 if I am not mistaken, one of the best known African chiefs in the district came several days' march to inform him that 'the beast had reappeared'. Unfortunately, that is all I can say, for M. Millet left the district in 1951, and I have not been able to go there myself. The rewards in kind which this official offered the pygmies for tangible proof of the animal's presence yielded no result.

Around Ouessou, the natives talk of a big animal which does have a horn on its nose—though I don't know whether it has one or several. They are just as afraid of it as the Kelle people.

Around Epena, Impfondo, and Dongou, the presence of a beast which sometimes disembowels elephants is also known, but it does not seem to be prevalent there now as in the preceding districts. A specimen was supposed to have been killed twenty years ago at Dongou, but on the left of the Ubangi and in the Belgian Congo.”

The latter part of this report clearly refers to the Emela-ntouka—hardly surprising because the account comes from the same region we have been exploring. The descriptive features of Hughes’s *Chipekwe*, discussed in chapter 15, also agree in all particulars; the animal is very probably one and the same with Emela-ntouka. In developing a working hypothesis as to the identity of the Emela-ntouka, we need first to decide to which major class of animals it belongs. Because the descriptions definitely rule out birds, amphibians, fish, and all invertebrates, we are again left with reptiles and mammals. A mammal such as an aquatic rhinoceros would be the most plausible and obvious choice, except for one thing: the tail. However, it may be that the attribution of a heavy tail is incorrect, in which case the rhinoceros idea is very viable. It could well be that just as a horn has occasionally been added to the sauropod-like Mokele-mbembe, the heavy tail of the latter animal may have been erroneously attached to the Emela-ntouka.

Let us now see to what extent the rhinoceros hypothesis can account for the data. Rhinoceroses are mammals, belonging to the order Perissodactyla, hoofed animals with the mid-line of the foot passing through the third toe. They are closely related to horses and tapirs and to the extinct groups known as titanotheres, chalicotheres, and lophiodonts. As noted by Professor Horace Wood, of the five kinds of living rhinoceroses, the Sumatran rhinoceros (*Dicerorhenus sumatrensis*) with two horns represents a Miocene stage of evolution; the Javan (*Rhinoceros sondaicus*) and the Indian (*Rhinoceros unicornis*), each with one horn, and the black rhinoceros (*Diceros bicornis*), with two horns, represent the various Pliocene stages. The white, or square-lipped, rhinoceros (*Ceratotherium simum*) with two horns would not have been an anachronism in the Pleistocene.

There are three main rhinoceros groups: the Cursorial or Upland Rhinoceroses (Hyracodontidae), the Aquatic Rhinoceroses (Amynodontidae), and the True or Upland Rhinoceroses (Rhinocerotidae). The ancestral forms are found among the Upland group, which first appeared in the Eocene about 50 million years ago. These ancestral forms were hornless and closely resembled contemporary members of the horse family. The fossil record indicates that they became extinct during the Oligocene, 40 to 45 million years ago. The second group, the Aquatic Amynodonts, were robust, heavy forms more closely resembling hippopotamuses than rhinoceroses, inhabiting swamps and marshes. They flourished during the Oligocene, dying out 10 to 20 million years ago. As these two groups became extinct, there was a natural tendency for the true Rhinoceroses to invade the ecological niches or habitats previously occupied by the vanishing rival groups. Modern forms can be recognisably traced back to the Lower Oligocene. It is not unreasonable, therefore, to postulate that a type adapted to a semi-aquatic life might have survived in the Congo swamps.

Although none of the known living species can be truly said to be aquatic, the Indian rhinoceros likes to rest in the water and is well adapted to life in it. These animals are skilful swimmers and divers which easily and frequently cross very wide rivers such as the Brahmaputra in India. Wolfgang Ullrich reported in *Der Zoologische Garten* as follows: "In a small lake covered with water hyacinths, we found nine rhinoceros; several of them, including a calf about four months old and a subadult lying close together. Two of them had even put their heads on another's back. At most, only the noses, the eyes, and the ears were visible above the group". Again, "When a rhinoceros came to the edge of a lake where two others were already resting, those two arose uttering threatening sounds. Then the rhino on the shore would make a snorting sound. It sounded as if someone was blowing air through a hose into water. The two rhinos immediately answered with the same sound, then went back to rest and allowed the newcomer to rest with them".

Thus the degree of aquatic adaptation ascribed to the *Emela-ntouka* is a small step indeed from this living form; and the sounds certainly fit the range of sounds attributed to the *Emela-ntouka*. During courtship rhinoceroses also snort, sniff, grunt, or even squeak.

All rhinoceroses, both living and extinct, are vegetarians, with food ranging from savanna grass to reeds, twigs, young bamboo shoots, leaves, and even water hyacinth. As has already been noted, we were given the impression that the *Emela-ntouka* eats malombo and other types of leaves rather than the malombo fruit itself. The dietary preferences of rhinoceroses are completely consistent with these reports.

The general configuration, size, hairless condition of the skin, size of footprints, grey to dark grey color, all fit quite well. The three toes of the rhinoceros might also leave claw-like impressions. Some primitive types had the front digits reduced to four while the related chalicotheres had very claw-like digits indeed.

The alleged propensity of the *Emela-ntouka* for killing elephants that approach or enter the water, as well as its reputation for killing buffalo or hippopotamuses, does not coincide with the known behaviour of African rhinoceroses when confronted with these animals. The role in the case of encounters between elephants and rhinos is reversed, the elephant almost always coming off the victor. Bitter fights between elephants and rhinoceros bulls have been observed in the Kruger National Park. A fight observed at a watering hole ended when the rhinoceros finally lay dead in large pools of blood from four holes made by the elephant's tusks, as well as from other injuries.

The rather rare observations of encounters between rhinos and hippos again resulted in victories for the hippo. C. A. W. Guggisberg once watched a rhinoceros about to drink from a clear, spring-fed pond in the Tsavo National Park. There a hippopotamus surfaced, grabbed the rhino's right front leg, pulled him down, and tore him to pieces with his huge tusks.

Another point can be made for the rhinoceros identification in connection with reproduction. No references have ever been made to

the Emela-ntouka laying eggs, from which one may conclude that the young animals are probably born alive, as in practically all mammals.

The single horn of the Emela-ntouka is neatly accounted for because there is a variety of species of rhinoceroses, both living and extinct, with only one horn, although within the entire group the range is from no horn at all to as many as three. There is, however, a slight difficulty with the rhinoceros horn. The Emela-ntouka horn is described as being of ivory like an elephant tusk, or at least as resembling ivory. Rhinoceros horn is neither ivory nor true horn or bone, but consists of a fused keratinous substance allied to hair. In certain extinct forms the horns were confined to males, which could add to descriptive confusion if this kind of sexual dimorphism is present in the *Emela-ntouka*.

Another aspect that seems problematical is that the nose horn of the rhinoceros is rather loosely attached to the skin, representing, in the opinion of some zoologists, a distinct structural weak point. The horn, especially a long one of up to 1.5 metres (5 feet) is easily torn off. Horns are promptly regrown; this feature hardly fits the fierce elephant-, hippo-, and buffalo-killing behaviour of the Emela-ntouka.

In view of these considerations let us explore the other group, that is, the reptiles, to look for animals providing as good or better a match to the description of the *Emela-ntouka*. Looking over the roster of all living and extinct reptiles, one group immediately stands out as the most likely candidate from a morphological point of view. I am referring to the Ceratopsian dinosaurs which include the well-known *Triceratops*, a latecomer in the Upper Cretaceous. In considering them as possible candidates for the identity of the Emela-ntouka difficulty arises immediately. All fossil remains so far discovered are from North America and Northwest Asia. Ordinarily this fact would not be of much concern, the distribution of fossil remains by their very nature being haphazard and incomplete, and thus, rarely taken as truly representative of past-population distributions. This is particularly relevant to places like the African continent where, for the most part, very little paleon-

tological work has been done. However, it is disturbing that no evidence of Ceratopsia was found by German scientists in their extensive excavations of the giant reptile beds of Tendaguru in East Africa. They did find that many other well-known dinosaur families, such as the stegosaurs, were represented.

Edwin H. Colbert of the Museum of Natural History in New York addressed this question in 1948 in his article, "Evolution of the Horned Dinosaurs", published in *Evolution*. He writes: "Why should the Ceratopsia, with the exception of *Protoceratops*, be confined to the continent of North America? Is the limitation of the Ceratopsians to North America, as based upon our present information, more apparent than real, being the result of accidents in preservation with a resultant imperfect knowledge of the fossil record?". He discussed the very limited finds in Mongolia, their absence from European Upper Cretaceous dinosaur-bearing beds, as well as from comparable African dinosaur-bearing sediments. Colbert concluded: "Therefore, the absence of Ceratopsians in the upper Cretaceous of Europe and of Africa is regarded as representing a probable real absence of these animals at that time, rather than an imperfection of the fossil record, as is very likely the case in north-eastern Asia".

The key here may be "at that time", that is, in the Upper Cretaceous, 65 million years ago. If we are going to entertain the possibility of a surviving Ceratopsian at all, and in a very restricted area, it might be that the survivors are not represented in the African fossil record, which is very limited or nonexistent in much of the continent. It may be that, as post-Cretaceous environments became unsuitable in other parts of the world, the group became extinct, except for those members of it which found themselves in the unchanging climate of equatorial Africa.

Aside from the foregoing difficulty, let us examine whether any of the members of this group can account for the characteristics ascribed to the Emelantouka.

The Ceratopsia constitute a suborder of the order Ornithischia (the "bird-hipped" dinosaurs). This suborder is divided into two families, the Protoceratopsidae, which are ancestral, and the

Ceratopsidae. The Protoceratopsidae were derived from a plant-eating ornithomimid, 2 metres (7 feet) long, from Mongolia, known as *Psittacosaurus*, or “parrot reptile”, because it had a hooked beak like a parrot. As these groups evolved, they developed as many as three horns (even the so-called *Pentaceratops* was really three-horned; its two additional “horns” were really growths of bone extending from the region of the cheeks). They also developed shields; while in the other line the shields were reduced. In both groups the small horn was associated with large brow horns and vice versa.

In relation to the Emelantouka only those forms with a single, large nasal horn are probable candidates. This line of evolution eventually led to the well-known *Triceratops* and is characterised by short, and in some cases, inconspicuous head frills. The large, long, fenestrated, frilled types must be ruled out because the frilled structures would hardly have gone unnoticed by our informants if present on the head of the Emelantouka.

Beginning with *Protoceratops*, evolutionary development can be traced via *Leptoceratops* to the really relevant forms *Monoclonius*, *Centrosaurus*, and *Brachyceratops*. The latter is a dinosaur, 2 metres (6 feet) in length, resembling *Protoceratops*, except that it has a modest horn on the snout. Opinion is widespread among most paleontologists that this animal is really only a young form of *Monoclonius*. This seems reasonable as they are both found in the same beds of the Upper Cretaceous of Montana. Some scientists maintain that *Monoclonius* and *Centrosaurus* are synonymous, which seems less likely because the great nasal horn of *Centrosaurus* arches forward, while that of *Monoclonius* juts outward with a slight backward arch.

Both these types of animals were large, reaching overall lengths, including a massive tail, of 8 metres (26 feet). They were formidable creatures, fully capable of living up to the elephant- and buffalo-ripping behaviour attributed to the Emelantouka. The great nasal horn is formed by the upgrowth and union of the nasal bones into a single, solid structure. As such the structure represents a true horn and could not have been torn off, as in the rhinoceros.



47. Reconstruction of *Monoclonius* by Zdeněk Burian.

The diet of foliage and leaves favoured by the Emelantouka corresponds exactly to what has been inferred for the Ceratopsian diet. The feeding habits are manifest from the structure of the teeth and from the type of vegetation preserved with the fossil remains. The mouth was sheathed with a cutting beak, much like a turtle. There was a series of teeth presenting a vertical, slightly twisted wearing surface towards that of the opposing series, the worn surface of the lower teeth facing outwards, that of the upper row inwards. There could not be a lateral grinding movement as in herbivorous mammals. According to Professor Richard S. Lull the lower jaw must have moved entirely in a vertical plane. The beak probably served for cropping the more succulent leaves and shoots of low trees or shrubs, the teeth being used to chop the food into short pieces before it was swallowed.

When we examine the probable environment of the Ceratopsia, we find it consistent with the semi-aquatic, amphibious *Emelantouka*. Although one often sees reconstructions of *Triceratops* placed against upland scenes, these dinosaurs must have been amphibious, swamp-living forms. As far as land vertebrates are concerned there were three modes of life available during the Mesozoic: the amphibious-aquatic, the arboreal, and the aerial. The upland vegetation was underdeveloped or inedible, compared with its present condition. According to Dr. W. D. Matthew, a highly respected paleontologist, the moist, torrid climate in the late Cretaceous at the end of the Mesozoic must have caused a great expansion and specialisation of amphibious, swamp-living forms adapted to the marshy jungles then prevalent. These are exactly the conditions that have persisted since the Cretaceous in this part of Africa.

Dry land areas did begin to expand greatly during the late Cretaceous as upland plants developed further; this set the stage for a corresponding spread of dry land forms, mainly mammals. At the time of the expansion of the upland realm, great land movements drained the Cretaceous sea, adjacent swamps, and river deltas in most of the world, greatly reducing the amphibious-aquatic domain, except for pockets in Africa and South America. All this certainly favours the identity of the *Emelantouka* as a form of Ceratopsian. However, we must still address the critical factor of reproduction. It is clear from the fossil eggs discovered with Mongolian fossil material in 1923 that a female *Protoceratops* had scooped out a hollow in warm sand and then laid a clutch of eggs. These eggs were elongated, 20 centimetres (8 inches) in length, and probably, as in modern lizards, protected by a leathery covering. It appears that the mother laid the eggs in a kind of horizontal spiral, the narrow end of each egg facing inward. Some circles have been found above others, suggesting that two or more females may have laid in the same nest. The eggs were covered with sand by the mother and left to incubate in the sun. Successful hatching of fertile eggs was not assured, as conditions may or may not have remained favourable, as in the case of some modern reptiles. Fossils have



48. Reconstruction of *Protoceratops* by Zdeněk Burian.

been found of partially developed embryos and young that must have died shortly after emerging from the egg. This evidence from the Gobi desert in Mongolia is of great importance to us because it establishes with certainty that ancestral Ceratopsians did not give birth to live young. If this were the case in all later forms the Ceratopsian identification presents a difficulty. Never, under any circumstances, was there the slightest comment or evidence from our informants that the Emela-ntouka lays eggs. One would have expected the natives to have been aware of any Emela-ntouka eggs and might even have collected them.

It is possible that some later Ceratopsians did not lay eggs but were ovoviviparous; that is, they retained the egg in the oviduct during the developmental period. Some modern snakes and lizards reproduce in this manner. Even in a single genus such as *Lacerta*, one species, *L. gilis*, is oviparous (egg-laying) and another, *L. viviparo*, is ovoviviparous. The latter condition is found in aquatic

reptiles such as the sea snakes. One can surmise that, as the mammals gradually evolved and proliferated, predation of dinosaur eggs by mammals became a serious problem; the ability to protect the embryo during its development within the oviduct would have conferred a considerable advantage. It may well be that mammalian dinosaur-egg predation contributed to the extinction of some forms. One balance, then, I submit that the Ceratopsian hypothesis remains viable, if improbable.

Of comparable importance are the feet which must correspond to the footprints reported and described by our informants. In general we gathered that the footprints made by Emela-ntouka were elephant sized, showing evidence of three toes or claw marks. The description differs in no way from that of the sauropod-like Mokele-mbembe.

In *Monoclonius*, the most viable Ceratopsian candidate, it is certain that there were three functional toes—the second, third, and fourth—the first being reduced and the fifth almost nonexistent. The functional toes must have left conspicuous, even claw-like marks, even though they were stubby and hoof-capped. The hoof-like structure was necessary to bear the considerable weight of the body and tail of these animals. The forefeet were broader, with five toes, although the outer two were reduced. Thus, the foot structure is compatible with the available descriptive evidence.

In addition to a single horn, the reports of Emela-ntouka would indicate a heavy tail, long enough to flatten grass while walking. The tail of the Ceratopsian, *Monoclonius*, in particular, accounts for this feature most adequately. As noted previously the rhinoceros idea falters mainly in this respect.

In our efforts to make an identification a final survey of the animal kingdom at once establishes that there are no other likely living mammals that need to be considered. However, among extinct animals, there were a few horned groups of about the right size. The first is *Arsinoitherium*, a peculiar animal the size of a rhinoceros belonging to the subungulates, which include the elephants and sirenians, or sea cows. This beast, probably a swamp-dweller, had a huge pair of horns on the nasal bones. These horns were fused

at the bottom and placed side by side, rather than front to back, as in the two-horned rhinoceros. Furthermore, the tail was very small, and so we can safely eliminate this animal as a candidate. For the sake of completeness I should also mention the titanotheres. These great mammals, related to rhinoceroses, flourished on lake-strewn plains of the Eocene and early Oligocene. They sprouted a single nasal horn and were about the right size, although the largest, *Brontops robustus*, stood almost 3 metres (9 feet) at the shoulder, somewhat larger than our descriptive catalogue requires. Although the single horn varied widely from species to species and was undoubtedly used for protection as well as intraspecific male rivalries, it always diverged into a "Y" configuration at the tip. The tips were rounded and flattened, somewhat like a pair of shovels. This feature, so dissimilar from all other horned



49. Reconstruction of *Arsinoitherium* by Zdeněk Burian.

candidates so far discussed, effectively puts the titanotheres out of the running. It hardly seems necessary to add that the tail was small, as in the rhinoceros.

As noted previously, there were other types of horned dinosaurs but these were more or less bipedal rather than quadrupedal, as required by our description, and many were carnivorous. I will discuss briefly only one type, known as *Ceratosaurus nasicornis*, which had a single horn, although probably somewhat blunt. Much uncertainty surrounds this creature as none of the other representatives of this group (the Theropoda) had such a horn. Consequently, many paleontologists hold that *Ceratosaurus* is a male form of the well-known carnivorous *Allosaurus*, or perhaps an abnormal condition in the group resulting from an arthritic condition. Whatever the case, these animal forms can readily be eliminated from our roster of candidates.

This leaves us, then, with a heavy-tailed, single-horned aquatic rhinoceros or an African version of Ceratopsian dinosaur such as *Monoclonius* or *Centrosaurus*. The major objection to the rhinoceros is the tail, while in the case of a horned dinosaur, all the morphological details fit quite well. The remaining difficulty arises from the fact that the distribution of fossil material suggests these dinosaurs never inhabited Africa. Yet, as mentioned earlier, such absence of fossil remains does not always indicate the actual distribution of prehistoric life forms. I can appreciate the opinion of the great majority of zoologists and paleontologists who believe that the survival of any dinosaur into the present time is improbable. I cannot agree that the idea is impossible, which is what makes the whole question so interesting.

Mbielu-mbielu-mbielu:

The Animal with Planks growing out of its Back

When shown a picture book of reconstructed fossil animals, one informant, Odette Gesonget, indicated that a drawing of a stegosaur resembled *Mbielu-mbielu-mbielu*, "the animal with planks growing out of its back". However, she could give us no additional information. My impression was that Odette had not actually seen the animal; rather that she was repeating stories told her by her parents and grandparents. Even a second interview session failed to elicit further data of substance.

When we followed up vague rumours from the general vicinity of Bounila, a village on the Likouala-aux-Herbes, 100 kilometres (60 miles) south, the only other worthwhile detail we gleaned was that the animal is rarely, if ever, seen on land—hardly indicative of stegosaur behaviour.

Informants, most importantly Bruno Antoine, described the "planks" as large, not to be confused with the serrated ridges of a crocodile or certain lizards. Also, much green algal growth is said to be present on the back and plates of the animal. Observers could not say what the body, head, tail, or feet looked like because the creature was usually observed in water, moving along submerged with only its back protruding. Vegetable growth on the back of a semi-aquatic animal would not be unusual because many species of turtles and even crocodilians display such a feature.

Extensive searches through a variety of written records revealed not a single documented reference to a stegosaur-like creature in Africa. There were a few Sunday-supplement type articles that speculated on the possibility of sauropod dinosaurs surviving in Africa, but these popularly written pieces offered no specific reported sightings or other hard data.

Obviously, this paucity of information severely handicaps any attempt to identify the creature. We must also bear in mind that the reports may refer to the already discussed Mokele-mbembe and/or the *Nguma-monene*, to be covered in the next chapter. Even though the descriptions specify that the plates resemble planks growing out of the back we are still handicapped.

Let us, however, pursue the stegosaur possibility. Stegosaurs, except for size, are the most spectacular of the Ornithischia (bird-hipped dinosaurs), the second great division of dinosaurs. They appeared in the upper Jurassic although their ancestry may be traced to the middle of the Triassic. Stegosaurs were the first group to develop plates and spines and they attained lengths of 10 metres (30 feet). The hind legs were significantly shorter than the front legs, the head was small, the brain diminutive. Some have suggested that the small brain was inadequate and so an enlarged spinal cord in the hip region acted as a second brain. This spinal cord node may have served as a subsidiary nerve centre, along with



50. Reconstructive painting of a *Stegosaurus* by Charles R. Knight.

another, smaller node in the shoulder region. These nerve centres were not additional brains. In fact, some paleontologists do not believe the cavities contained nervous tissue at all, but rather a gland secreting glycogen, which could be converted to blood sugar for booster-energy when any fighting or self-defence required exceptional exertion.

The stegosaur's double row of diamond-shaped plates and the spiked tail are impressive. Scientists still debate and speculate as to the real purpose of the plates. A few researchers have suggested that the plates acted as protective shields and were actually arranged horizontally, rather than vertically, in the living animal. Most, however, believe they helped in regulating body temperature because the plates had a copious blood supply. Neither explanation is entirely satisfactory.

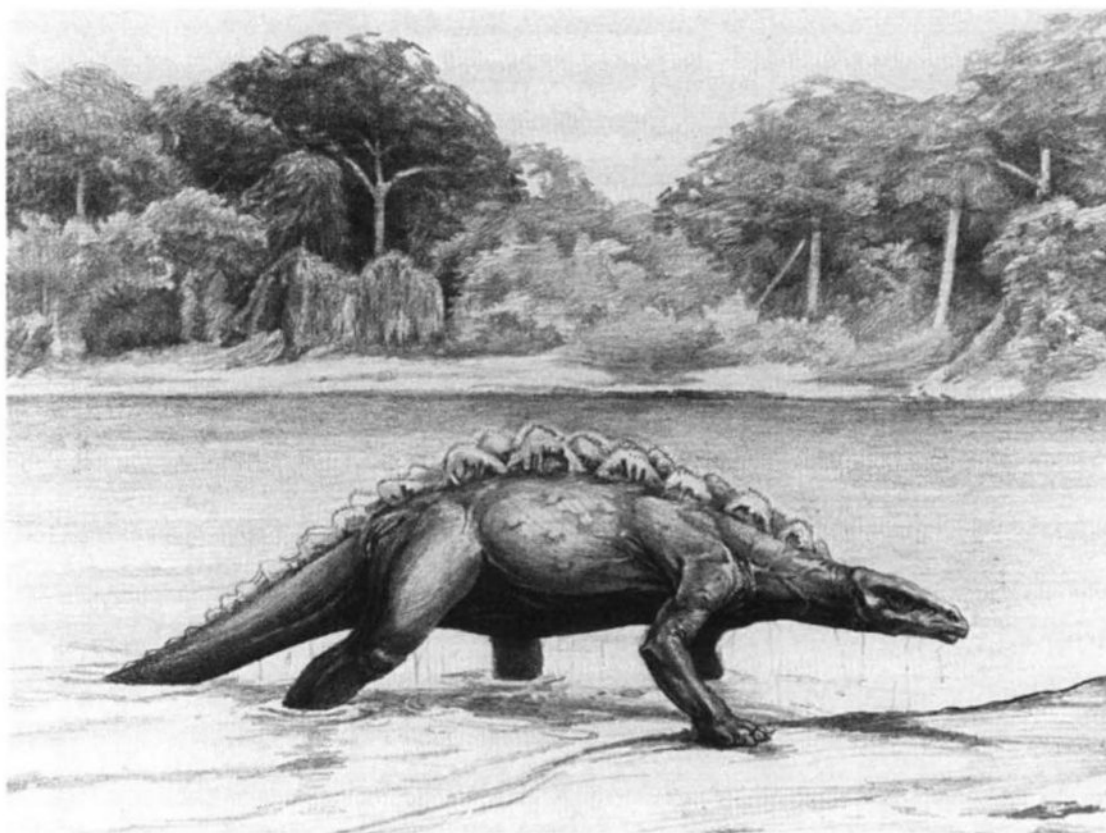
As far as the fossil record is concerned, the stegosaur group died out before the end of the Cretaceous, gradually being replaced by a closely related group, called ankylosaurs (rounded reptiles). These dinosaurs were descendants of *Scelidosaurus*, as were the stegosaurs, but developed a much more comprehensive protective armour which made them appear somewhat like giant, spiked tortoises. There was a great variety of sizes and configurations, but generally ankylosaurs were shorter than the stegosaurs. However, they were bulkier and, consequently, heavier. *Euoplocephalus* (*Ankylosaurus*) was 5 metres (16 feet) long and weighed 3,000 kilograms (3 tons). As a group, they persisted at least to the end of the Cretaceous. Both ankylosaurs and stegosaurs were widely distributed and their presence has been established in the famous Tendaguru fossil beds of east Africa and also in some South African fossil sites.

The wonderful discovery of dinosaur bones at Tendaguru, a virtual dinosaur graveyard, was not due to any scientist, but to a very perceptive mining engineer, B. Sattler. At the time (1907) the area of Tendaguru was a remote 20 kilometres (70 miles) from Lindi, a small station on the coast of what was then German East Africa (later Tanganyika, now Tanzania). Sattler contacted Professor Eberhard Fraas, a German scientist working in the area, about his

find of great bones. Fraas immediately recognised the significance of these deposits. The upshot of it all was a commitment of funds and an expedition led by Dr. W. Janensch, Keeper of the Berlin Geological and Paleontological Institute and Museum. During just the first four years of excavation 115,000 kilograms (250 tons) of bones were recovered. The marvellous huge deposit of dinosaur fossils at Tendaguru has yet to be exhausted.

The well-known African stegosaur, *Kentrosaurus*, was among the Tendaguru fossils. In fact, kentrosaurs were present in abundance: as many as fifty were found in a pit 18 metres (60 feet) deep. The largest of these were 6 to 7 metres (20 feet) long, looking much like the North American stegosaurs, except for the 12 to 14 pairs of plates which were more spine-like. Towards the neck the spines became more plate-like, comparable to the diamond-shaped, plank-like plates of *Stegosaurus*. None of the tree remains discovered at Tendaguru is familiar. There are strange dwarf conifers, unending jungles of ferns and great cycads. Unfortunately, it was a scene never beheld by human eyes, for in the epoch of Tendaguru's flourishing, humans existed only far in the evolutionary future.

The major stumbling block for the stegosaur or ankylosaur identification with mbielu-mbielu-mbielu is the latter's semi-aquatic behaviour. The best evidence suggests that both the stegosaurs and the ankylosaurs were land animals. However, remains of certain members of the ancestral group have been found in marine deposits—which at first glance sounds encouraging. Unfortunately, the evidence does not support the aquatic habitat for this group. Rather, its members were vegetarians feeding on plants near rivers and lagoons. In every other respect, the inferred characteristics of these creatures in one form or another correspond with what we have been told about the Mbielu-mbielu-mbielu. It is certainly possible that some animal of this kind which entered the water for protection evolved from these shore feeders. However, there is little, if any, fossil evidence on which to base such a speculation. I would remind the reader that the association of stegosaurs with the Mbielu-mbielu-mbielu hangs on a single tenuous thread: the



51. Drawing of *Mbielu-mbielu-mbielu* based on native descriptions.

identification by a single individual of a drawing from a picture book of reconstructed animals. Although the phrase, “the animal with the planks growing out of its back” cannot be lightly dismissed, it is difficult to accept this link at face value. One curious circumstance, concerning certain African cave drawings, should be noted. Renderings of elephant-like animals with a stegosaur-like back have been found in several locations. As usual, scholars have labelled these drawings of unknown animals as “mythical beasts”. It is anyone’s guess whether these drawings (and there are several different ones) represent real animals or are an ancient artist’s attempt to invest artistically altered elephants with some religious significance.

One view of the matter would simply lump reports of *Mbielu-mbielu-mbielu* with one or more of the other unknown animals said to exist in this region. For me, *Mbielu-mbielu-mbielu* remains an enigma.

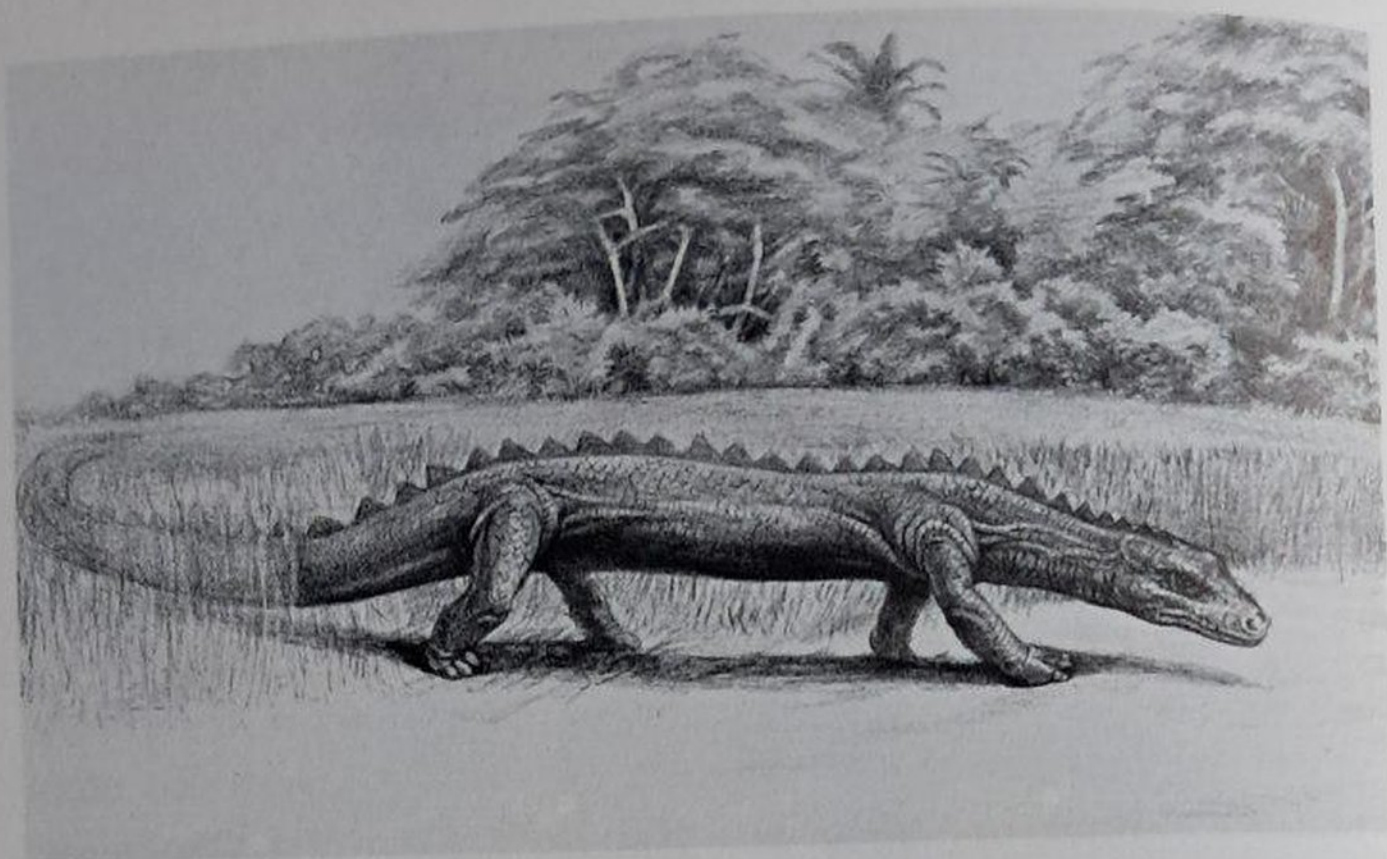
Nguma-monene: The Snake Dinosaur

Of all the animals described to us, the *Nguma-monene* is the most mysterious. It is significant that, although we have less descriptive information about this creature than any other in our dossier, it does happen to have been observed by an American missionary. Almost without exception, anecdotal evidence about the other unknown animals in Africa came to us from pygmies or Congolese. No matter how reliable these informants, the information they provided had been filtered through vast cultural differences.

Nguma-monene literally means large python or boa (*nguma* is python, boa, or snake; *monene* is large or great). Native descriptions suggest an animal like a giant snake, 40 to 60 metres (130 to 195 feet) in length, but with a serrated ridge running along all or most of its back. The head and neck are also said to be snake-like, but much longer, the tongue forked and reported to dart in and out like a snake's. However, our informants were emphatic that Nguma-monene was not just an oversized python.

All my reports of this creature come from the Dongou-Mataba River region. The Mataba is a tributary of the Ubangi River. A fairly substantial body of water, it has many tributaries of its own extending at least 250 kilometres (150 miles) west by northwest from the Ubangi at the village of Dongou, and about 35 kilometres north of Impfondo.

One clear, sunny morning in 1961 the eldest sister of Michel Zabatou, first secretary of the General Assembly, was bathing in the river. Suddenly she felt a disturbance from the water. To her astonishment and dismay, she beheld a great head and neck very like a snake's, but much larger, emerge about 15 metres (50 feet) from her.



52. Depiction of the *Nguma-monene* based on native informants' descriptions.

When the woman ran screaming from the river her cries brought the villagers rushing to the spot. For the next 30 minutes, they all watched the animal moving about in the water. Everyone was fascinated by the forked tongue that flicked in and out of the creature's mouth. They never did see very much more of the animal's body except for the ridge or frill down its back. It appeared elongated but certainly it was not a python. It was never seen to emerge from the water; instead, it gradually disappeared while moving upstream. I was never able to get an exact date and time for this sighting.

Evaluation of anecdotal information is especially difficult when one's informants are of a culture completely alien to one's own. And it is even more difficult with regard to descriptions of unknown animals. Consequently, I was thunderstruck when one day Gene casually remarked that another missionary, Joseph Ellis, had observed a strange animal some years before, north of Impfondo. Furthermore, Pastor Ellis had now retired and lived only a few hundred miles from my home in Chicago. During Gene's 1982-83 furlough to the United States, he described to

Joseph Ellis my investigations in the Congo and helped arrange a meeting.

In late December of 1983 I visited Pastor Ellis and his wife, both of whom turned out to be most pleasant and cooperative. During our talks, I felt that, for a nonscientist, Ellis was one of the best possible witnesses because he had never been preconditioned in any way with regard to the existence of unknown animals in the Congo. As a pastor of the United World Mission he had spent the ten years from 1963 to 1973 as a missionary in the Congo Republic, working at Impfondo with Gene.

Actually Ellis had set up his base at Dongou, a village on the Ubangi 35 kilometres as the pterodactyl flies, or about 40 kilometres by dugout from Impfondo. Just north of Dongou the Mataba River branches off in a northeasterly direction. A short distance upstream is the village of Mataba. Sometime during the rainy season, probably November of 1971, Pastor Ellis was making his way upstream with an African companion toward Mataba village. It was a clear, sunny day, and he was loudly singing "Praise God from Whom All Blessings Flow" to keep himself company. His 10-metre (30-foot) dugout was powered by an outboard that kept him going steadily upstream against the moderate current. Earlier he had noted some splashing which he assumed had been produced by fish. His african companion yelled "*yama, yama*", which means animal. Upon investigating they found that three hippos, two adults and one juvenile, were responsible for the commotion. Ellis, being a very curious type, was bent on running the dugout right up to the hippos, especially as a cow with her calf was among them (a very dangerous combination under any circumstances). Fortunately, the anxious remonstrances of his African companion persuaded Ellis to give up the idea.

After dropping off the African at his destination Ellis continued on his way to teach his class of Christians at Mataba about 1-2 kilometres farther upstream, where the river was about 60 metres (200 feet) wide. It was then that he observed a most amazing sight. Crossing the river was an incredible creature, about 20 metres (100 feet) from the right bank. Two thoughts raced through Joseph

Ellis's mind. "It's as long as my dugout, 10 metres (30 feet) and it has a back like a saw!" In stupefied awe he watched the animal move steadily towards the left bank. He shut off the outboard, having approached within 60 metres (200 feet) of the beast. The current began to carry him gently downstream. He watched the animal for about two minutes as it progressed smoothly across and then out of the river and into the jungle.

Ellis estimated that the elongated back of the animal protruded out of the water about 0.5 metre, including the diamond-shaped protrusions. Its back was visible below and to the side of the ridge of projections. Ellis surmised that the body, allowing for natural rounding, must have been between 0.5 to 1 metre maximum diameter. Because most of the creature was submerged and was never clearly seen out of the water this feature is highly conjectural. He could not remember whether the triangular projections were contiguous or whether there was space between each protrusion at the base between the leading and trailing edges, nor could he discern how thick the protrusions were. The colour of the visible portion of the creature was dark, tending toward greyish-brown at the observation range of 60-plus metres, and, of course, no surface skin texture was discernible.

Ellis could not determine whether the animal was swimming or walking on the river bottom. The latter seems extremely unlikely, as the water was high, due to the rainy season. The depth of the river was probably 5 to 6 metres (15 to 20 feet) deep, although he made no measurements. Ellis noted that the animal's motion was steady and regular, with no visible disturbance from paddling or possible tail action. He had the impression of a slight undulatory motion, that is, a very slight up and down movement. To the best of his recollection, this was due to slight vertical flexure rather than to surges such as might result from paddling strokes.

As the animal entered the tall grass (at least 1 metre high) on the river bank no additional parts of its body were exposed to view. Ellis saw nothing that could be identified as a head and neck, only the elongated, rather regular back with a long row of triangular protrusions. His recollection is that the protrusions did not run

along all the visible portion of the animal, but certainly along a substantial part of it. This description is remarkably similar to the reports of Mbielu-mbielu-mbielu. I would like to point out that the estimate of size given me by Ellis refers to that part of the animal's body visible above the water. As he did not see the head or tail the overall length must have been greater than 10 metres (30 feet).

Ellis then continued on to Mataba village to warn the people of what he had seen. To his great surprise he might just as well have been talking about the rain, as they totally ignored his protestations. The people simply did not want to discuss what he had seen, expressing neither interest nor surprise. Sensing that perhaps the subject was taboo, Ellis spoke no more of it, except to his missionary colleagues, none of whom had ever seen anything like the creature he described. During our talk the retired missionary told me that, at the time, he had had the impulse to follow the animal into the jungle. On reflection he concluded that the creature might well be dangerous. However, if the pygmies at Mataba had been inclined to follow or hunt the animal, he would have been eager to go along with them. Ellis remembers feeling almost as amazed at their seeming disinterest as he had been at the sight of the strange creature itself.

When I questioned him more closely on the way the animal disappeared into the tall grass and underbrush of the jungle at the river bank, Ellis was positive it never raised itself sufficiently to be visible after leaving the water. This established its body as low-slung, probably lizard- or crocodile-like. Ellis was entirely familiar with the crocodiles in the area and there was no possibility whatsoever that the creature could have been an oversized crocodile. Although sparse, the descriptions we gathered encompass some critical information that is helpful in assigning a probable identification to the Nguma-monene. The salient features are the flicking, forked tongue and the serrated ridge along a substantial portion of the animal's back. The forked tongue implies that the animal is either a snake or a lizard. However, the saw-like ridge or crest on the back eliminates snakes because none of the approximately 2,500 known species of snakes possesses such a feature, nor

is there evidence of such a feature in the fossil record of snakes. Snakes have evolved relatively recently (65 million years ago) from lizard ancestors, along the way losing legs, ears, and movable eyelids. The boids (boas and pythons, including the anacondas) are the most primitive and are at the base of all snake evolution. Some members of this group still retain anal claws which are actually vestigial limbs. They are most closely related to the monitor lizards, of which the Komodo dragon (4 metres, or 14 feet) is the largest example. This lizard is not, however, the longest. The record goes to the Papua monitor (*Varanus salvadorii*) of New Guinea. Although not as heavy as the Komodo dragon (*Varanus komodoensis*), this monitor lizard is definitely longer and more snake-like. Its length has been reported as 3 to 3.7 metres (10 to 12 feet) by Eric Worrell; 4.6 metres (15 feet) in *Australian Wildlife*; and 5.5 metres (18 feet) by Robin Smith and Keith Willey. The recent fossil record in Australia has been interpreted by some paleontologists to include monitor lizards (*Megalania prisca*) with an overall length of 8 metres (25 feet). That brings us quite close to Pastor Ellis's probably accurate, minimum estimate of 9 metres (30 feet) for the unknown animal he observed.

Before continuing our discussion of what kind of lizard the Nguma-monene might be, let us review other reports of large, snake-like animals in Central Africa. Most valuable are the discussions in Bernard Heuvelmans's books and in Willy Ley's *The Lungfish, the Dodo, and the Unicorn*. Heuvelmans reports the following: in 1923, H. C. Jackson, British deputy governor, published a study of the Nuer people of the Upper Nile Province. The Nuer people had described to him a large, snake-like creature, which they called *lau*. It was said to be much larger than a python, both in length and girth, a different colour, different shape of the jaw, a bone or horn-like substance near the tail, and a short crest of hair on the back of its head. Jackson writes: "The existence of a bone or hornlike substance near the tail would illustrate a step further back in the development of the serpent creation, the small rudimentary legs of the python marking an intermediate stage between the Lau and the ordinary snake as we know it". Some

informants described the animal's long hairs (reminiscent of some of the mud-fish of the Nile) with which it entangled its unwilling victims and dragged them into the river. In the rainy season its belly was said to gurgle like the rumbling of an elephant. (This description led Heuvelmans to suggest that the *lau* is a giant African catfish of the genus *Clarias*, in which case it would have nothing in common with the Nguma-monene.)

Jackson's report intrigued British naturalist J. G. Millais, who followed up the matter during his search for the source of the Nile. Millais located an old hunter, Sergeant Stephens, who stated that the *lau* was a reptile unknown to science inhabiting the Sudanese marshes. The description obtained by Millais from Stephens is consistent with the others collected. We should note that Heuvelmans's suggestion that Jackson's reference to the possible intermediate stage of the *lau* in snake evolution implies legs are present (although the assumption is never expressly stated). Stephens's description provides no information on this point. According to Stephens, the *lau* inhabits the great swamp of the Nile valleys, is very rare, and is seldom seen. Its size is given as 12 to 30 metres (40 to 100 feet), with a body as big as a donkey or a horse, brown or dark yellow in colour. Its head is snake-like with either tentacles or thick, wiry hairs which it extends to seize its prey. Although the natives fear the creature greatly, a number of instances of the killing of a *lau* were reported. A loud, booming cry heard at night was ascribed to the *lau*. Stephens also stated that a Belgian administrator at Rejaf who had just come up from the Congo was convinced that the *lau* existed. The man had seen one of the great beasts in a swamp and fired at it several times, although his bullets had no effect. He added that the monster made a huge trail in the swamp as it passed into deeper water.

We have further information from Captain William Hichens, who published an article entitled "African Mystery Beasts" in *Discovery* (December 1937). This article included a photograph of a wood carving of the *lau*'s head. However, the photo contributes little towards the identification of the creature. The carving looks like an

African Dance mask, and does not know to what extent the artefact reflects the configuration of the lau head.

Lucien Blancou, a chief game inspector in French Equatorial africa, collected a great deal of information about animals, strange and not so strange, between 1949 and 1953. Much of this information has been transmitted to Heuvelmans via private communications. Heuvelmans reports that around 1930 an unknown snake-like animal in the Ubangi-Shari was described to Blancou by Linda Banda of Ippy. Called *badigui* or *ngakoula ngou*, it was like a giant snake, killed hippopotamuses without leaving any sign of a wound, and browsed on branches of trees without leaving the water. Heuvelmans writes: "This would of course be a very odd diet for a snake, which in any case would not be able to lift its head out of the water unless it was resting on the bottom, so one may well suspect that there might be a bulkier body behind the snake-like head and neck".

I would like to remind the reader that not a single known snake is herbivorous.

The chief of the Yetomane division, a great hunter, told Blancou that in 1928 one of the animals had crushed a field of manioc, leaving tracks 1 to 1.5 metres (3 to 5 feet) wide. The same beast was said to have killed a hippopotamus at about the same time in the Brouchouchou River near Chief Mapouka's village. The villagers ate the dead hippopotamus without any qualms.

A quote from Heuvelmans's *On the Track of Unknown Animals* rounds out the description:

"The Baya gave Blancou a similar description of the monster, which they called *diba*, at Bozoum in 1932, and so did a young Banziri secretary, who said that it was traditionally called *songo*. In 1934 he learnt more precise and definite details about the beast from old Moussa, whose information about the *mourou-ngou* has already been quoted. Indeed the reason why the old man was brought to see the white man who was interested in animals was because he was known as 'the-man-who-had-seen-the-*badigui*'.

When he was about 14 years old [Lucien Blancou relates], and the Whites had not yet come (about 1890, I suppose), Moussa was out laying fish-traps with his father in the Kibi stream, which runs into a tributary of the Ouaka called the Gounda in what is now the Bakala

district. It was one o'clock in the afternoon in the middle of the rainy season. Suddenly Moussa saw the *badigui* eating the large leaves of a *roro*, a tree which grows in forest-galleries. Its head was flat and a bit larger than a python's. (Moussa spread his hands and put them together to show me the size). Its neck was as thick as a man's thigh and about 25 feet [8 metres] long, much longer than a giraffe's; it had no hair, but was as smooth as a snake, with similar but larger markings. The underneath of its neck was lighter—also like a snake's. Moussa did not see its body.

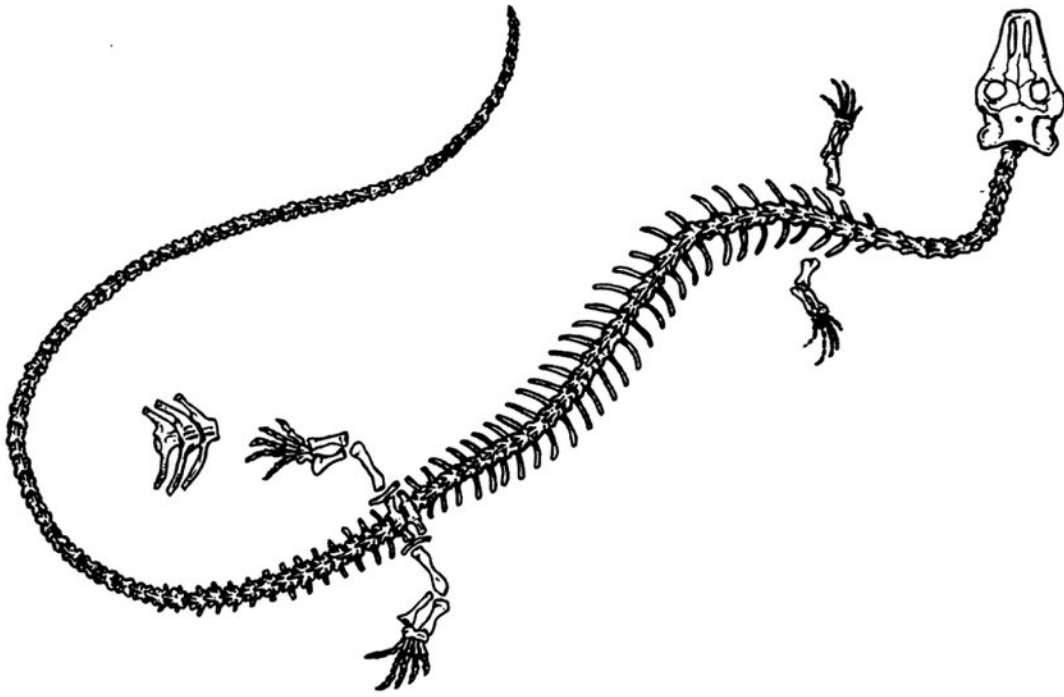
His father told him to follow him and run away. The animal gave no cry, but Moussa said that he had heard its cry at other times when he had not seen the beast himself. He did not imitate it for me.

According to him, the old men believed the *badigui* was dangerous, but he had never heard of anyone else meeting one. He had seen its tracks out of the water, but only on the bank, and they were as broad as a python's. Finally, he said that the *badigui* does not frequent places where you find hippopotami, for it kills them.

In 1945, Mitikata, Lucien Blancou's gun-bearer, whom I have already mentioned, told him about the *ngakoula-ngou*, saying that it was a huge snake which left tracks as broad as a lorry. He said he had seen one of these tracks 15 years before, near the outpost at Ndélé, but not the animal itself."

These additional descriptions reinforce my hypothesis that the Nguma-monene is some kind of lizard. Because of similarities among the reports it seems quite probable that they all refer to the same creature. The question as to just what kind of lizard we may have is fascinating indeed, as we may be dealing with a living link between lizards and snakes. Although the point of departure must be between monitor lizards, on the one hand, and boid snakes, on the other, we would not expect the link to be between modern monitors, but rather between a form derived from ancient monitor stock. The monitor group was already well established in the Cretaceous, which leads me to speculate that the lizard type may be derived from a primitive, semi-aquatic group known as dolichosaurs, rather than more advanced monitors, such as the 8-metre (25-foot) Australian *Megalania*. These ancestral forms were small with short limbs—and a greatly elongated body, which is the crucial element for our purpose.

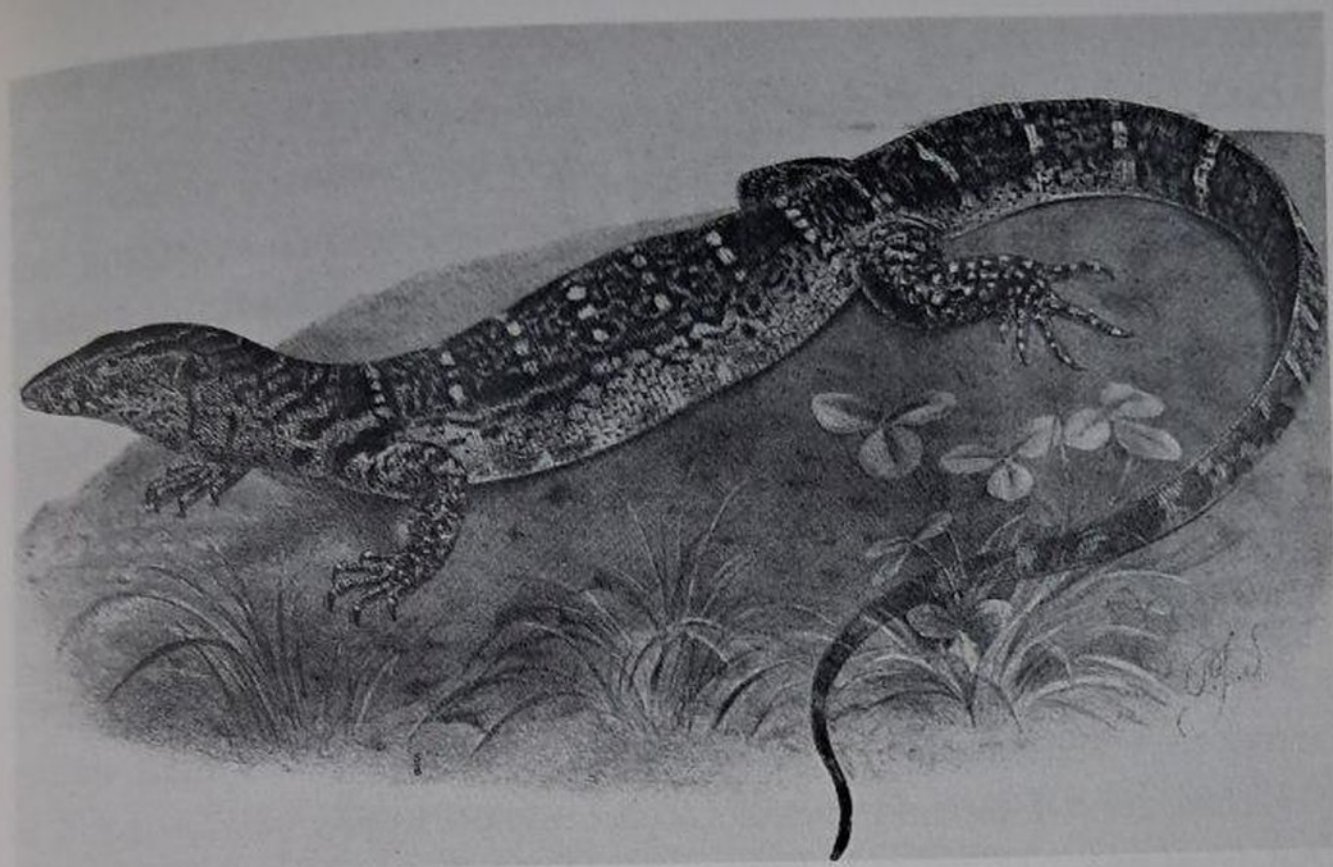
Acetosaurus of the Middle Cretaceous is the most typical. The poorly known forms, *Palaeophis* and *Simoliophis*, also from the



53. Skeleton of *Acetosaurus* (*Andriosaurus*), a semi-aquatic ancestral lizard from the Lower Cretaceous, after Seeley, in *The Osteology of Reptiles* by S. W. Williston, 1925.

Cretaceous and Eocene, had elongated snake-like bodies, but the vertebrae accorded more with the pattern found in monitor lizards. A. S. Romer, a leading paleontologist, thinks that if better known, *Palaeophis* and *Simoliophis* might represent a group truly intermediate between snakes and their lizard ancestors; but he finds difficulty with this transitional status because the known fossil remains have been found in deposits suggesting a marine environment. Could the Nguma-monene be such a surviving connection between lizards and snakes?

A monitor 10 to 15 metres (30 to 50 feet) in length with a saw-toothed frill or dorsal ridge extending down the back of the body and tail would also fit the bill. Two problems arise from this suggestion. The first is size, because no fossil or living lizard is known to have reached lengths of 15 metres (50 feet). Still, forms 10 to 12 metres (30 to 40 feet) have been found in the fossil record. And being snake-like, they are animals with not a great deal of bulk, but are animals with tails perhaps three or four times the length of their bodies. The reticulated python reaches lengths of 9.8 metres (32 feet); and even longer specimens are reported,



54. The Nile Monitor, *Varanus niloticus*, drawn by P. J. Smit published in *Zoology of Egypt*, Volume I, 1898.

although not fully verified. No living monitor lizard has a dorsal ridge conspicuous enough to qualify. But a variety of other lizards do, such as the New World iguana.

The most ubiquitous monitor in the Congo basin is the Nile monitor, *Varanus niloticus*, which reaches lengths of more than 2 metres (7 feet) and has habits that conform very well with those attributed to the Nguma-monene. The Nile monitor is found especially along rivers, feeds on eggs (especially crocodile eggs), and spends much time in the water. It is an excellent swimmer, using its broad, flattened tail as an oar, propelling itself along smoothly with a sweeping motion.

In spite of these favourable correspondences, the Nile monitor must be excluded from consideration as being the Nguma-monene. Even if we allowed the length to be scaled up to the gigantic proportions required, the monitor has no saw-toothed dorsal ridge, a feature about which Ellis was absolutely certain.

In summary, the Nguma-monene probably is a very long-tailed lizard with short legs, a saw-toothed dorsal ridge along its back, a snake-like head and neck, and brownish coloration. It is possibly

a primitive form more closely related to the ancestral stock from which both snakes and monitor lizards arose.

Because both monitors and boids are carnivorous it seems more reasonable to suppose that the Nguma-monene is a meat and egg eater, rather than a leaf eater, as suggested by at least one report. Reproduction may involve eggs, as is the case in monitors, or the birth could be live, as is the case with some boid snakes.

In spite of correspondences, it must be remembered that all the reports I have cited may not have referred to the same animal. However, the details certainly appear to describe animals of a similar configuration.

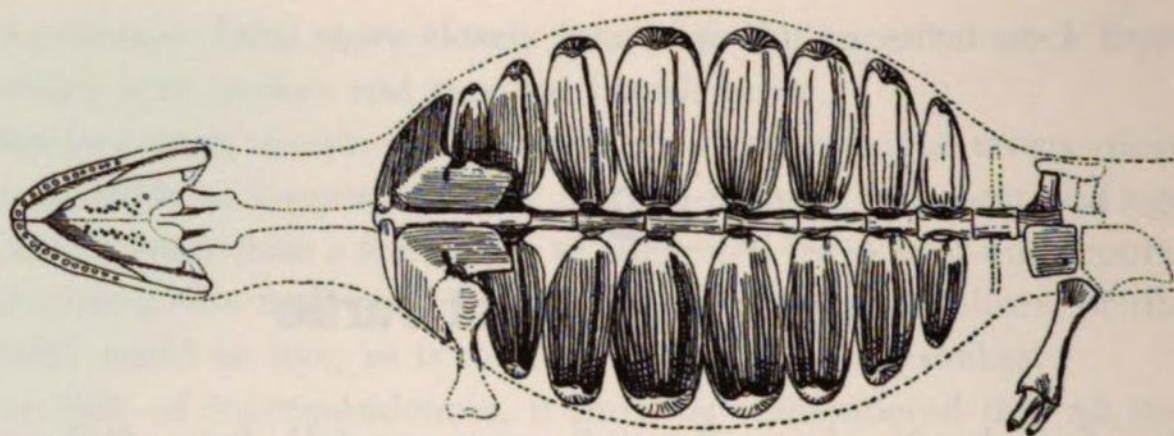
Ndendecki: A Giant Turtle

We first heard about the "dinosaur turtle" from Gilbert Bonguenele Manengue, the agent de la Sécurité Publique at Brazzaville. Mr. Manengue had been commissioned by Lt. Col. Pascal Mouassiposso, military governor general of Brazzaville, to gather data about unknown animals for us. Manengue was born in Boha, a little village on the Likouala-aux-Herbes River, only 40 kilometres from Lake Tele. He reported that he had received his information from eyewitness observers living in the village of Boha; data obtained from him, therefore, were secondhand.

Information about the great turtle was very limited, possibly because the only unusual feature about the animal was its colossal size. Informants may have felt it was quite enough simply to say "giant turtle" about an animal whose shell was some 4 to 5 metres (12 to 15 feet) in diameter.

Such a giant turtle hardly seems believable, yet the fossil record includes both marine (*Archelon ischyros*) and land turtles (*Colossochelys atlas*), their remains indicating animals 6 metres (20 feet) in length. However, not even the giant tortoises of the Seychelles Islands (1.2 metres, 4 feet) approach the reported dimensions of *Ndendecki*. The leatherback turtle, a living species (*Dermochelys coriacea*), does reach a length of 3 metres (10 feet), but it is found only in the sea.

The shell of the *Ndendecki* was described as more rounded than other kinds of turtles. In spite of its size the natives neither fear it nor consider it dangerous. Although information on its diet was generally vague, a few informants suggested that it fed on detritus, the rich organic matter found at the bottom of rivers, lakes, and pools.



55. Restoration of *Eunotosaurus africanus* after D. M. S. Watson published in the *Proceedings of Zoological Society of London*, 1914.

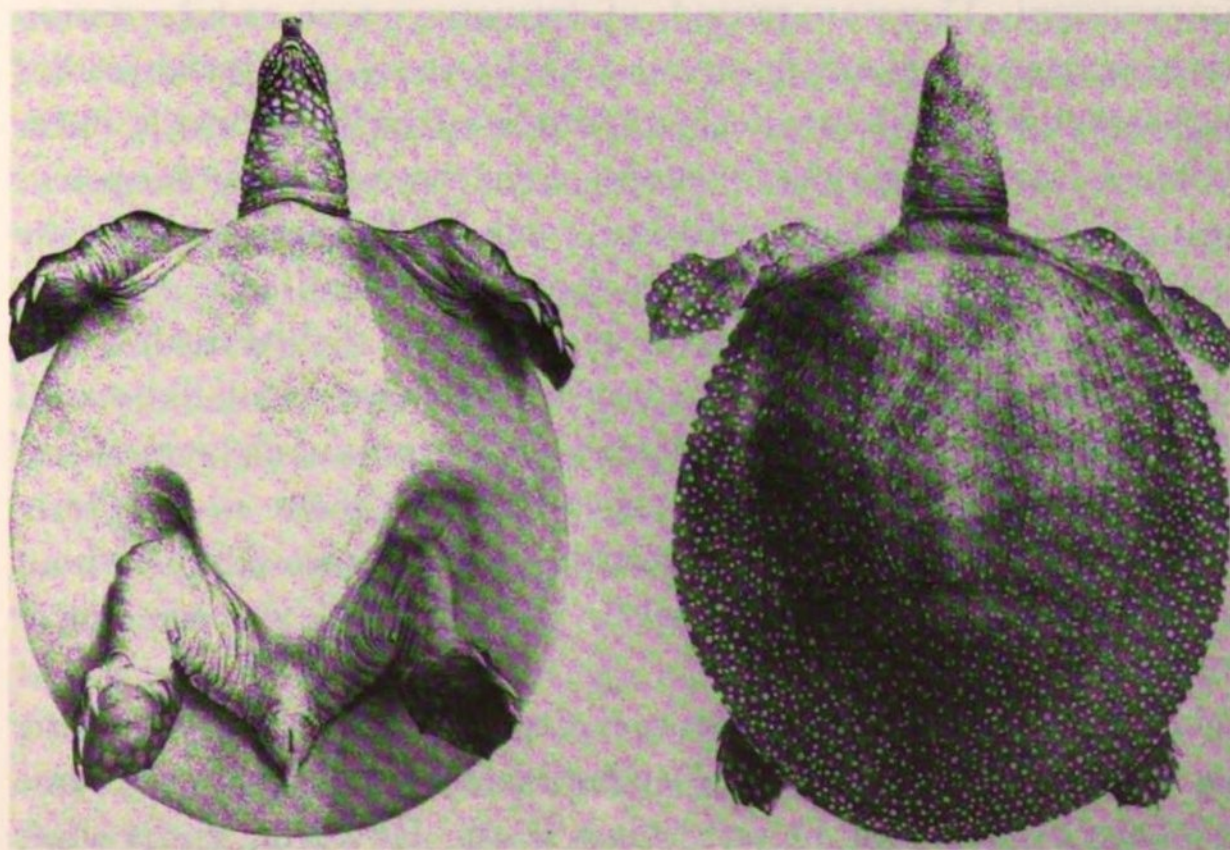
Turtles are familiar animals to most of us and normally would hardly be classed as “monsters”. As a group they are indeed ancient, their origin dating back 320 million years to some time in the Middle Permian. In that period, there existed in South Africa a small reptile called *Eunotosaurus*. The animal had teeth, unlike later forms (including the modern turtle). The number of vertebrae in the spine was also fewer than in other reptiles (as is the case with turtles). Following the first rib there were eight very broad ribs extending to either side, almost touching at the edges. These ribs probably formed the basis for the eventual evolution of the turtle shell. The animal was only 12 centimetres (5 inches) long—a long way indeed from the 4-metre (12-foot) giant reported in the Congo swamp.

By Triassic times true turtles were in existence and they have not changed very much to this day. The Chelonia, as turtles are called, developed independently and early on from the *Cotylosaur*-like stem reptiles. The animal’s bony shell is divided into two parts: the top, or carapace, comprises the back of the animal and the lower part, called the plastron, covers the belly. These two shields are connected by bony bridges at the sides. Thus, when the turtle’s head and legs are retracted, all its soft parts are protected by the bony structures. Turtles do not have teeth but rather a horny beak that covers the edges of the jaws. Some are meat eaters (mostly the aquatic varieties). Land turtles, called tortoises, are predominantly

vegetarian. Some species of either group feed on both plant and animal materials.

With this very cursory introduction to turtles, let us proceed to try to identify the Ndendecki. Based on reported descriptions, we require a very large, freshwater turtle, both carnivorous (or omnivorous) and amphibious. Marcellin Agagna was able to identify the Ndendecki as one and the same with *Trionyx triunguis*. As the reader will discover, this species fulfills all of the descriptive features rather well. I find this is gratifying indeed because it adds greatly to the degree of confidence we may place on other descriptions provided by our indigenous observers. Agagna sets the maximum size of the turtles at 2 metres (6½ feet), which allows a factor of roughly “2” for exaggeration by informants—not unreasonable in my experience.

The animal was first described in 1775 by Petter Forskål under the name *Testudo triunguis*, not on the basis of a Congo specimen, but rather on an Egyptian representative. Other names for the animal

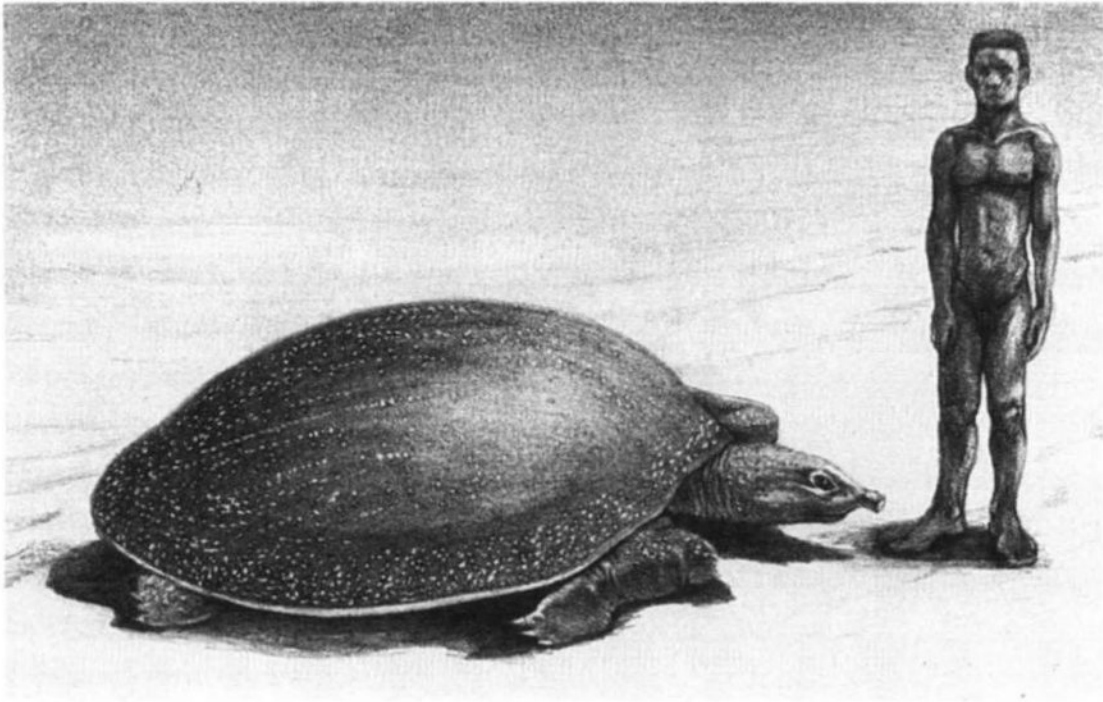


56. The giant turtle, *Trionyx triunguis*, drawn by P. J. Smit published in *Zoology of Egypt*, Volume I, 1898.

are *Trionyx niloticus*, *Trionyx aegyptiacus*, *Gymnopus aegyptiacus*, *Trionyx labiatus*, *Trionyx mortoni*, *Aspidonectis aspilus*, and *Fordia africana*. The names attached to it over a period of 210 years are useful for anyone who may wish to read more about this remarkable creature. The group it belongs to is also very ancient. About 180 fossils are recognisable as *Trionyx*; the oldest, known as *Sinaspidectes wimani*, most probably dates from the Upper Jurassic. The older sources especially contain most of the cultural lore about this great turtle. During the last century the shells were much sought after for use as war shields.

The size for these turtles is officially stated as about 1 metre, although some authorities qualify the statement by "one metre or more". But even a metre is a respectable size for a shield. Little is known about the growth rate in very old animals; such knowledge would bear directly on how large they might get. Tradition assigns apocryphal ages of more than 200 years to turtles. If growth continues, even at a slow rate, such long life would result in rather large specimens. However, growth in reptiles is usually intermittent. There are periods of dormancy, such as hibernation or aestivation, when little or no growth occurs. Available studies indicate that growth rate declines with age. Harliss Morlock, in his book on turtles, lists the longevity as determined in some species in captivity. The oldest verified example is 138 years. In any case a size of 2 metres as claimed by Agagna appears to be possible. *Trionyx triunguis* belongs to the so-called soft-shelled turtles. The term "soft shell" refers to the fact that the hard, plate-like scutes found on other varieties are replaced by a continuous layer of soft skin. The feet possess three claws and the snout is peculiarly elongated into a snorkel-like breathing tube. The jaws are without teeth but quite sharp. The neck is very long, yet completely retractable.

Many turtles, including *Trionyx triunguis*, are able to endure long periods without breathing. Depending on temperature the time between breaths may be one to two hours. However, under these conditions, activity is greatly reduced. Direct oxygen absorption from the water is especially well-developed in *Trionyx triunguis*.



57. The *Ndendeeki* entering Lake Tele.

The oxygen passes into the body mainly through the skin of the mouth, throat, and the cloacal opening. This characteristic permits the turtle to remain submerged out of sight for long periods. The skin of the upper surface of the shell is covered with tubercles arranged, more or less, in longitudinal wavy lines. The colour of the upper surface of the skin is olive to olive-brown, spotted with white dots in the young and the half-grown, less pronounced or obscure in adults.

The animal is considered to be quite aggressive and makes frequent excursions onto land, pulling itself up steep riverbanks by its strong claws. Along the Nile, according to the local Arabs, this turtle searches for and feeds on crocodile eggs. Others report that it also eats crocodile hatchlings. The major food supply appears to be fish and shellfish which it can consume underwater. As in all turtles, reproduction occurs by means of eggs. In April, fifty to sixty eggs are deposited in sandbanks, where they are hatched by the warmth of the sun. Both eyesight and sense of smell are well developed. Turtles are able to hear, but generally they make few sounds. Land tortoises appear to be the most vocal; their sounds

may play a part in mating. In some species “chirps” or “groans” appear to be related to stressful situations.

This description is brief but adequate to identify with a high degree of certainty the Ndendecki as *Trionyx triunguis*. More importantly, the native descriptions are verified in this case and lend support to the validity and relative accuracy of our informants.

Mahamba: A Giant Crocodile

Crocodiles are fascinating yet fearsome creatures, especially when they reportedly measure over 15 metres (50 feet) in length. And that is just the size ascribed by our informants to the *Mahamba*, making it truly a giant crocodile. The ordinary Nile crocodile (*Crocodylus niloticus*) is well known (although not abundant) in the region. The Lingala word for crocodile is *nkoli*, but our informants insisted that the Mahambas were not just outsized specimens of the ordinary variety. Also, there was absolute agreement that the Mahamba was a crocodile, not a Nguma-monene, Mokele-mbembe, or any of the other strange creatures described to us. The Congolese are not the only ones describing 15-metre (50-foot) crocodiles. In his account of river life on the Congo in the late nineteenth century, Belgian explorer John Reinhardt Werner reported seeing crocodiles 12-15 metres (40 to 50 feet) in length, presumably specimens of the Nile crocodile:

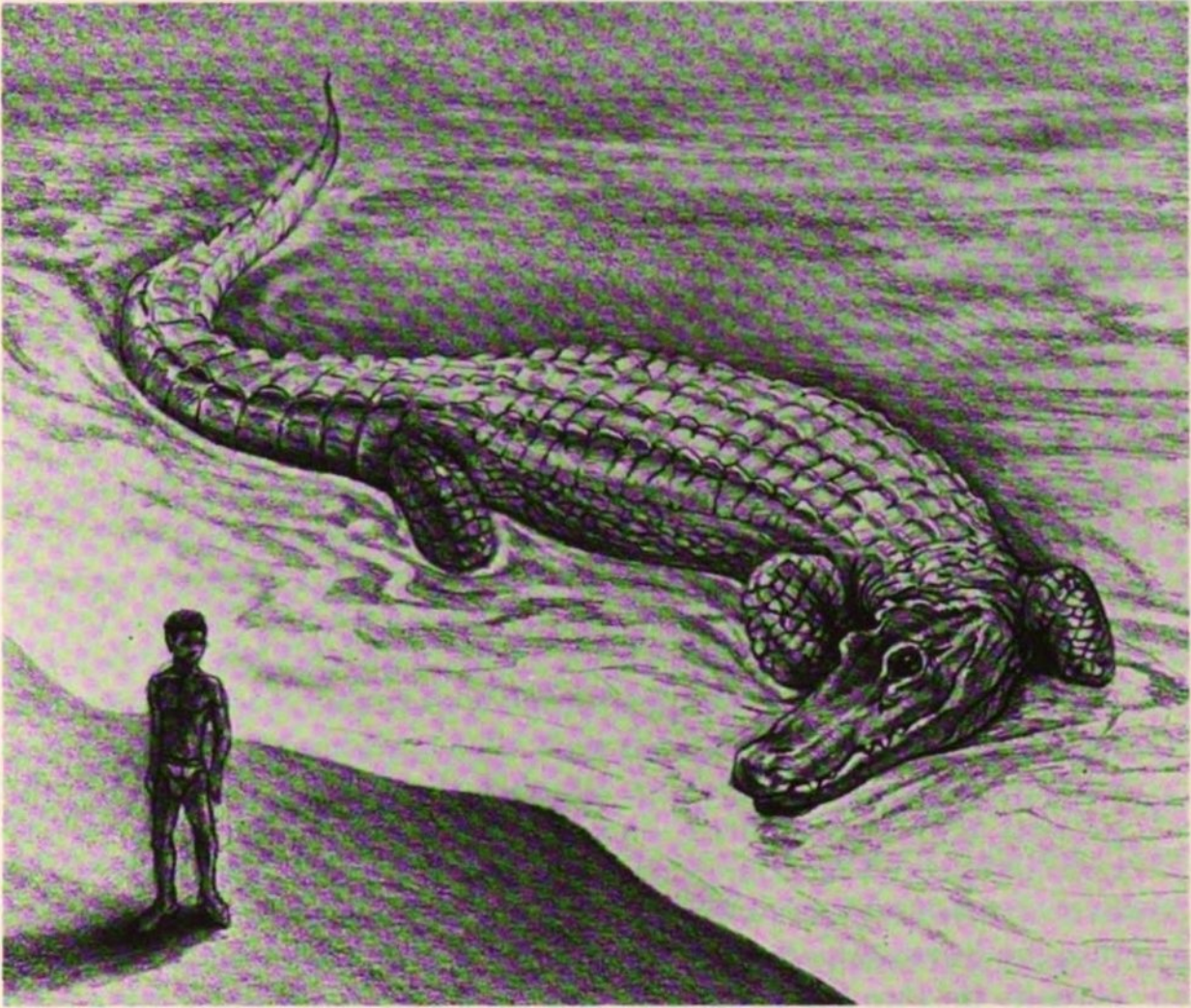
“As the steamer rushes past the low banks—the grasses, reeds, and papyrus swaying about in the wash of the screw—a sudden rush and loud splash announce the hasty retreat of a crocodile, disturbed in the middle of his afternoon nap by a rushing fiery monster, which is come and gone almost before he knows what has happened. On a low sand-spit, projecting beyond the grasses, may sometimes be seen a monster crocodile, perhaps upwards of fifty feet long: at any rate, I have seen several considerably longer than the little A.I.A. (ten-ton steam launch), and she measures forty-two feet. On one occasion, I had landed on a large sand-bank to shoot ducks. Having bagged one, and seeing that the rest had alighted beyond a low ridge of sand, I stooped down and crawled along behind the ridge till I thought I was within range, when I raised my head and looked over. Sure enough there were the ducks, not fifty yards from me, while half-way between me and them lay the biggest crocodile I had ever seen. Comparing him with the A.I.A. which lay in deep water some 300 yards off, I reckoned him to be quite fifty feet long: while the

centre of the saw-like ridge on the top of his back must have been about four feet above the sand on which his belly rested. Having only a shot-gun with me, I had, on first seeing him, sent a native boy who was with me for my rifle, and made the foregoing observations while waiting for his return. The crocodile, meanwhile, took no notice of me—either because he was asleep, or because I was out of his sight, being, to use a nautical term, on the starboard quarter—while taking care to keep well out of range of his huge tail. As the boy was a long time coming, I considered it advisable to get a little further off, and in so doing alarmed the ducks, which flew away to another bank. As we were quite out of meat on board, this sight so wrought upon my feelings that, forgetting all about the crocodile, I took a snap shot after the ducks, which I missed, but so frightened the huge saurian that he made off for the water, scattering the sand far and wide with a sweep of his tail.” (Chapter 8, pp. 108-9.)

“Two or three days after this we suddenly brought up on a sand bank, with only three feet of water. The engines were at once stopped, but the steamer’s bow was embedded in the sand, which seemed to heave up and down under us, and the water was strangely disturbed. I was looking for the cause of this unusual commotion (which I should have set down as being caused by our running into a hippo, had the river been deeper at that spot, but there was not enough water to cover one), when I saw an enormous crocodile—longer, I am certain, than the A.I.A., and therefore over forty feet—rush across the bank and tumble into the deep water beyond. I never before saw a large crocodile move so quickly, and I had no time to get a shot at him. He must have heard us coming, and been trying to make for the deep water on our side of the bank, when we ran into him and jammed him on the sand. We struck him while moving at the rate of four miles an hour, but during the short time he was in view, I could not see that he bore any marks of the collision.” (Chapter 9, p. 125.)

Neither these estimates of size nor the insistence by our Congolese informants that the Mahamba differs from the *nkoli* (Nile crocodile) can be accepted at face value to prove the existence of a different species. But this anecdotal evidence is what makes the whole matter interesting from the cryptozoological standpoint.

To begin our analysis, let us first pin down the descriptive features of the Mahamba. It is said to resemble an ordinary crocodile, but all reports agree on its much greater length. Reproduction is via eggs. The animal is a meat-eater, including the flesh of humans.



58. The *Mahamba* based on descriptions of native African observers.

Again, these data supply no differences from ordinary crocodiles. The creatures are said to dig long underground tunnels, 50 to 1000 metres (50 to 1000 yards) long. At the end is a cavern or cave in which the monster reposes.

Do ordinary crocodiles make such tunnels and lairs? The answer is yes. We have some detailed information reported by Mr. Anthony Charles Pooley, the administrator of Natal Park in Zululand, which is outlined in H. C. Bernhard Grzimek's *Animal Life Encyclopedia*. In 1968, in order to avoid heavy losses of crocodile eggs to natural predators, Park officials collected and incubated some eggs. After hatching, the young were raised in concrete tanks. When space ran out, Park workers dug ponds in the earth. After a short spell of cold weather they found that ten

crocodiles 40 to 50 centimetres (16 to 20 inches) long had dug a tunnel in the bank of the pond above the water:

“The tunnel was over 60 centimetres (24 inches) long and led to a rather large hollow, in which the animals were lying. The same sort of thing was done by 60 one-year old crocodiles in another natural pond. Although the animals had been living there over three months, they too began to dig after the onset of the cold season. These crocodiles, 60-90 centimetres (24-35 inches) in length, dug twelve burrows, and from the time they began this activity they ceased to feed. Whenever the day was cool, all the crocodiles stayed in the burrows. Only the largest animals ventured out on sunny days, to bask in the sun. The largest tunnel was 4 metres (13 feet) long, and the shortest measured 1.2 metres (4 feet). The passages were straight and level; if the water in the pond had risen by only about 10 centimetres (4 inches), they would have been flooded. When the burrows were opened, all the crocodiles were found lying with their heads pointing toward the entrance. They did not try to bite or run away; they seemed indifferent, although they dug their claws into the ground and braced their bodies against the walls. Five or six crocodiles could be seen at the end of each tunnel, tightly packed in two or three layers. At first it was assumed that the crocodiles had dug the burrows with their claws, but finally it was found that they actually bit into the steep bank just above the water level, where the ground is soft. With the mouthful of dirt between their jaws, they turn, dive underwater, and shake their heads back and forth, presumably with the mouth open. Two or three crocodiles could be seen working on a single hole.

In June and July of 1968, there was frost in Zululand for the first time in five years. Many young crocodiles kept in the cement tanks fell victim to the cold or contracted lung disorders. But during this time, there were no cases of death or illness among the young crocodiles in the earth ponds. Accordingly, 100 three-to-four-month-old crocodiles were put into similar earth ponds. After a week, they had all dug into the bank, with an average of five animals in each burrow. All the passages were situated in the southern or southeastern banks of the ponds. In this way, the animals protected themselves from the prevailing cold winds which, like the rain, came from this direction; whereas the warm north winds blew into the burrow entrances. All of these crocodiles which had made burrows began to eat again in September when the weather became warmer. But the small crocodiles ran back into their burrows at the first sign of danger. During the hot season, too, the animals chose to stay in their shady shelters rather than expose themselves in the open water to predators, particularly those from the air.”

This excerpt clearly illustrates that what our informants claimed for the Mahamba (except for scale) corresponds exactly with observed crocodile behaviour. Also it allows us to infer the utility of the burrows and tunnels.

Now let us take up the crucial matter of size. In order to conclude whether 15 metre-(50-foot-)crocodiles are possible, we must first examine the fossil record. Crocodiles are ancient indeed, existing 65 million years ago in the Cretaceous very much as we know them today. They are the closest living relatives of the dinosaurs. We begin with a group of reptiles called thecodonts which first appears in the early Triassic and Upper Permian, 230 million years ago. The thecodonts are divided into two groups, the Phytosauria and the Pseudosuchia. Only the latter is important to us because it is from this stock that dinosaurs, pterosaurs (flying reptiles), and crocodilians are descended. Strange as it may seem, the crocodilians are descendants of animals that walked on their hind legs. Although there were plenty of Pseudosuchia which did not, they are not crocodile ancestors. A trace of this fact is still observable, since the hind legs of crocodiles are longer than the front ones, but they are not as long as their ancestors' legs.

The probable ancestor of all crocodilians was a form called *Protosuchus*, about 1 metre (3 feet) in length, found in fossil beds of Arizona in Upper Triassic layers. During the Jurassic a great number of crocodiles appeared. Called Mesosuchians as a group, they showed a few characteristics somewhat more primitive than those of living crocodilians. Eusuchians, or true crocodiles, appeared in the Cretaceous, and, to all intents and purposes, are identical to present living forms. *Phobosuchus*, known from Cretaceous fossil beds in Texas, was over 16 metres (52 feet) long with a 2-metre (6-foot) skull; *Rhamphosuchus*, from fossil beds in India, was 18 metres (60 feet) long.

Crocodilians are divided into three groups: crocodiles, alligators, and gavials. *Phobosuchus* (horror crocodile) was a true crocodile; and except for size would look much like a modern Nile crocodile. Could a surviving *Phobosuchus* or closely related species be our Mahamba? It is certainly possible and would be a marvellously



59. Reconstruction of *Protosuchus* by Zdeněk Burian.

satisfying cryptozoological phenomenon. Yet we must once more apply Occam's razor: could exceptionally large examples of the known Nile crocodile, *Crocodylus niloticus*, be responsible for the reports of the Mahamba?

Adult crocodiles have no predators to fear. It is man who has thoroughly decimated the crocodile population—not only in Africa, but also in New Guinea, South America, Florida, and every other area where crocodilians have flourished. With the help of modern firearms humans are fast destroying these animals. Crocodile handbags, shoes, and belts are in fashion. In the face of this commercial demand for crocodile skins, neither conservation laws nor progress has been able to stem the tide of slaughter. If protection of the animal is not strictly implemented, it will become even more difficult to explore the real possibility of a Mahamba in the Congo.

The Nile crocodile is generally reported as reaching a maximum size of 5.5 to 6 metres (18 to 20 feet). We also have reports of larger

specimens. For example, H. Besser claimed to have killed a 7.6-metre (26-foot) specimen in the Mbaka River in Tanzania in March of 1903. The animal was missing one quarter of its tail! Thus the animal was probably about 8.6 metres (28 feet) long when intact. The circumference of the animal was 4.26 metres (13½ feet), and the skull was 1.4 metres (4½ feet) long and 0.95 metres (3 feet) wide. Skeletal remains referable to an extinct form of Nile crocodile in Madagascar indicate a length, in life, of 10 metres (32½ feet). This is still not quite up to 15 metres (50 feet), but is close enough, depending on how much we are willing to allow for exaggeration.

There are also reports (although unsubstantiated) of sea-going crocodiles, 12 to 15 metres (40 to 50 feet) (*Crocodylus porosus*), from the vicinity of southern India, Sunda Islands, New Guinea, Makja, and northern Australia. This species, with its preference for salt water, cannot be a candidate for our Mahamba, which inhabits the freshwater rivers and swamps of the Congo.

Let us examine the growth pattern of crocodiles to see if it is reasonable that a Nile crocodile of great age in a remote area seldom visited by humans, such as the Likouala swamp, might reach a length of 15 metres (50 feet). Measured growth rates of crocodiles during the first seven years of life indicate a rapid increase in length of about 27 centimetres (10½ inches) per year. As the animal ages, this maximal rate decreases to a rate of 3.6 centimetres (1½ inches) per year at twenty-seven years of age. No one knows what the maximum possible length is and if growth continues throughout the life of the animal, as is the case in some fish, such as the sturgeon. Thus, if crocodiles continue to grow, it would seem possible that very old specimens might attain a size compatible with the description of the Mahamba. (For some reason, in captivity, crocodiles never reach the size they might in the wild.) Bernard Heuvelmans has given me permission to quote some relevant information given to him by Dr. A. Monard, a zoologist who investigated reports of a giant Congo crocodile in the 1930s and published his findings in an article entitled "Sur l'Existence en Angola d'un Grand Reptile encore Inconnu". The reported

creature was called *Lipata* and was said to exist in northeastern Angola. Dr. Monard writes:

“We questioned the Chief of Tyipukungu and all the more intelligent natives; whenever we could we went to the banks of the Tyihumbwe and paddled in the marshes in sun and rain. The chief set two natives to watch the river when we could not do so. I went and slept under the stars for three nights 6 miles from the camp at a place where the lipata was supposed to live; I put out a small pig as bait, with a bag of strychnine tied to its leg. In fact we did all we possibly could in the hopes of seeing the animal at least; but in vain.”

According to Dr. Monard, the following facts were established:

“1. Its name is *lipata*, and not *libata* as my correspondent (A. da Paz) wrote. All the natives pronounce it in the same way.

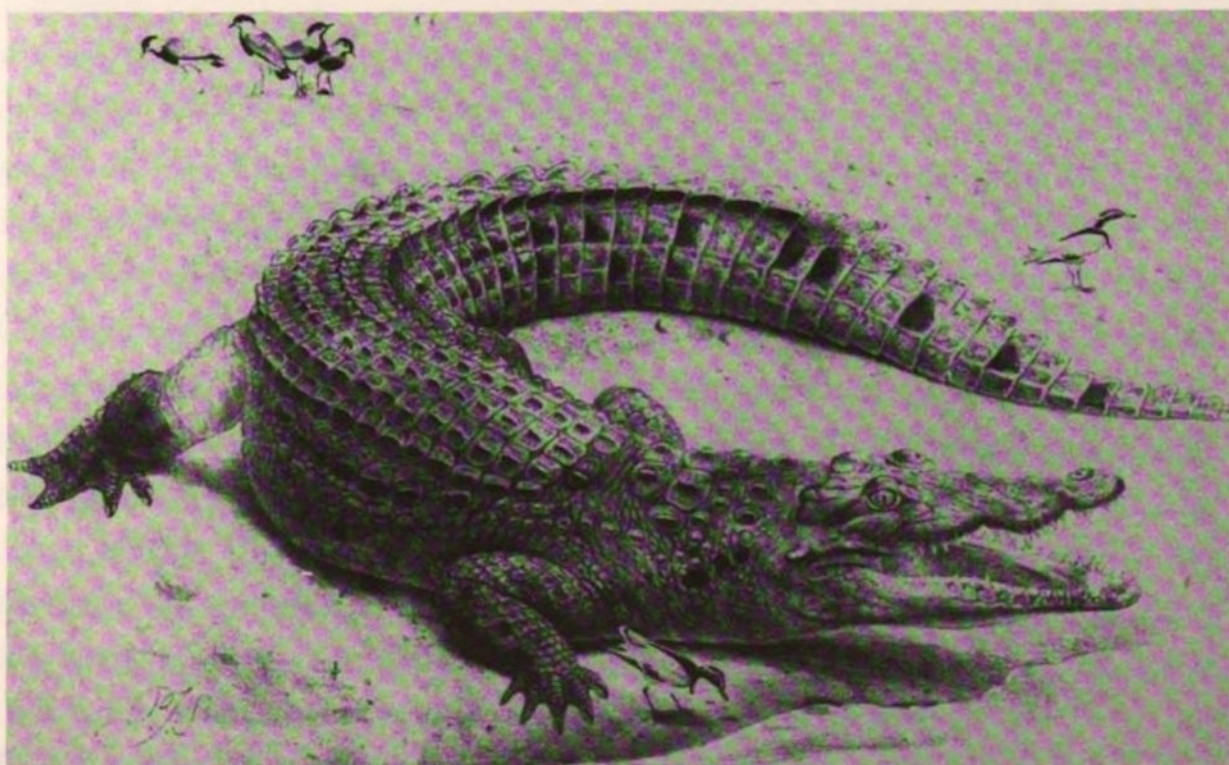
2. It exists only in the upper Tyihumbwe and in the Kasai; I have heard nothing of its presence in the Kuilo. Around Tyipukungu there are only two, one some six miles upstream from the other. Some natives say that there are three, others that there are many. Later we were told that the upstream *lipata* (the one I set the bait for) had left its favourite haunt to settle even further upstream.

3. It is almost always hidden in the water; it does not appear on the surface except in the morning between nine and ten o'clock. Others say that you can see it in the evening before the sun goes down. All agree that it is very active when rain falls, and that there is the best chance of seeing it then. It rarely comes out of the water; all the same we were shown some faint tracks made by the *lipata* on a little beach; they were too obliterated for us to make anything of them. On 1 September 1932, a man from Tyipukungu saw it sleeping on dry land around 9 or 10 a.m. The women on the Tyihumbwe who are in the habit of fishing on the river have almost all seen it at one time or another. They make a point of shouting before going into the water and this drives the beast away. As soon as it hears or is aware of man, it dives and disappears.

4. It attacks animals of all kinds—goats, pigs, cattle and even men—which it swallows in one mouthful. It will also eat crocodiles. The year before (1931), it took an ox and a goat belonging to the natives. This year it had taken nothing so far. Our correspondent knew of its existence in 1927 when he was on the way to Dala; the natives came and asked him for guns to kill it with, for it had just taken one of their cattle. Several *lipatas* have been killed. When the soma was a boy

(which must have been 40 to 45 years ago), the natives set a trap after a *lipata* had taken three of their cattle. The animal took the bait and was killed. A white man who had shot a hippopotamus one evening came back in the morning to haul his quarry out of the water. He saw two *lipatas* eating its meat, and succeeded in killing one. We showed the natives a drawing of a crocodile; they unhesitatingly called it *lipata*. They called the larger of two other drawings *lipata* and the smaller *ngandu* (crocodile). Of a second pair, one broad and the other narrow, they called the first *lipata*, the second *ngandu*. The animal is said to be 13 to 20 feet long; like the crocodile, it has a serrated ridge of scales along its tail; its mouth is larger, its throat wider, and its eyes are closer together on the top of its head—an interesting detail. One native said that the *lipata* is a *ngandu*; but they all distinguish between the two animals. If you try to find what the difference is, the answer is always the same: *lipata* big; *ngandu* small. They do not seem to know of the existence of young *lipatas*, nor of big crocodiles.”

Dr. Monard drew the conclusion from the information he gathered that the Lipata is simply a large crocodile. Whether the Lipata and the Mahamba are identical or not one cannot say, but I agree that the evidence supports such a conclusion. I have found that mere



60. The Nile Crocodile, *Crocodylus niloticus*, drawn by P. J. Smit, published in *Zoology of Egypt*, Volume I, 1898.

size, exceptionally large or small, generally results in a special designation. The special name may not mean a different species, in a zoological sense. This does not settle the matter, however. Bernard Heuvelmans points out that only four kinds of crocodiles are known in Africa: *Crocodylus niloticus*, *C. cataphractus*, *C. frontatus*, and *Osteolaemus tetraspis* (and *osborni*). The latter is a small black variety, a specimen of which we collected at Kinami. This small, 2-metre (6-foot) maximum, species certainly could not be either the Lipata or the Mahamba.

Only the Nile crocodile begins to approach the required size, so the conservative conclusion is that very large examples of this species are given the special name of Mahamba or Lipata. These large specimens would have to be very old indeed to reach the reported size.

Then again, the Mahamba may be an unknown species, much larger than the run-of-the-mill Nile crocodile. As Bernard Heuvelmans remarked to me, "Only an examination of a skin or skull can settle the question".

Ngoima: Great Monkey-eating Bird

The major source of my information about the great bird *Ngoima* was André Mouelle, commissaire politique of the République Populaire du Congo. The enormous bird he described as having been seen by him is quire rare now. Its wingspread was 3 to 4 metres (9 to 13 feet), with talons and legs as large and powerful as a man's hand and forearm. It places its nest at the top of a tall jungle tree. Although its favourite food is monkeys, the bird also preys on goats, which are extremely small in the Congo. The beak has a cruel appearance, hooked downward, a feature typical of many carnivorous birds, such as eagles, hawks, and buzzards. The coloration of the bird is dark brown to black with lighter underparts and lighter shadings and patterns underneath the tips of its feathers.

From this description one might conclude that *Ngoima* is some kind of eagle. We have only to think of the well-known monkey-eating eagle of the Philippines (*Pithecophaga*). However, the creature we seek to identify is found in central West Africa. In pondering the matter I remembered the pictorial cover of a book by Paul du Chaillu entitled *Lost in the Jungle*. The engraved image was impressive, depicting a giant eagle on the back of a monkey, its huge talons plunged into the monkey's neck. Du Chaillu described this great eagle in some detail, having actually observed one at close range. Known as *Guanionien*, "the leopard of the air", the bird fed on gazelles, goats, and monkeys. It was as difficult to find the bird as it was to capture one. The *Guanionien* certainly sounds like what the commissaire politique was describing!

Du Chaillu learned that the Congolese natives feared the great birds because of their formidable strength. He was told that they even carried off babies. A native saying states: "People had better

not try to get hold of the Guanionien's young if they want to keep their sight''.

In his book du Chaillu describes a Guanionien attacking some monkeys, an event which he himself observed. He noted that the breast of the huge bird was spotted somewhat like a leopard's—hence, the phrase "leopard of the air". There can be no doubt that du Chaillu's monkey-eating eagle is the great martial eagle, *Polemaetus bellicosus*. Could this also be the Ngoima?

The martial eagle was first described by Daudin in 1800 under the name *Falco bellicosus*. In 1930, David Bannerman published a field description in his *Birds of Tropical West Africa*.

"The immense size of the Martial Eagle—much larger than any other Eagle in our area, except the next species to be dealt with, is the best guide to identification. An adult female will measure 33 in. from bill to tail and span 88 in. across the wings. The tail is comparatively short, but the wings are long. The old birds may be distinguished by the dark brown back, throat, and upper breast; the lower breast and belly white spotted with brown. The feet are quite exceptionally powerful, with huge black claws, and the legs feathered to the toes.

Immature birds are lighter brown above, pure white below, including the feathered legs. It is important to note this last character, which helps to distinguish it from the immature Crowned-Hawk Eagle which has spotted thighs and legs. In young birds, the underside of the wing as seen in flight is mainly white."

Bannerman gives the African range of the martial eagle as extending south of the Sahara from Abyssinia on the east and Gambia on the west to Cape Province, but not occurring in the Guinea and Equatorial forests. It is a high flyer and will attack its prey by performing long, shallow swoops. Peter Steyn, South African naturalist, well known for his wild-bird photography, states that the birds have been observed to descend on prey from a distance of 6 kilometres (4 miles). At close quarters the attack is much steeper; then it is more like a parachute dropping, which is comparable to du Chaillu's description of the monkey attack he witnessed. This fierce bird preys on many different animals, including all kinds of small antelope, many species of small

mammals and birds, as well as monkeys, smaller domestic animals, smaller goats, lambs, and piglets. It builds nests of sticks high in trees anywhere from 7 to 70 metres (23 to 230 feet) from the ground.

The characteristics and habits of the martial eagle agree in all respects with descriptions of the *Ngoima*, except for its habitat, which is reported to be only rarely, if ever, in forest areas. The *Ngoima* is obviously a forest bird, having been observed in the Congolese jungle. It may be that a subspecies of the martial eagle extended its range into forest areas some time in the past.

Another more minor difference between the two birds is size. The female martial eagle (which is larger than the male) has an average wingspread of 2.6 metres (88 inches). Thus, it is possible that exceptional individuals might achieve a spread of up to 3 metres (10 feet). On the other hand, wingspreads of 4 metres (13 feet) ascribed to the *Ngoima* by our informants might represent either an overestimate or a very rare exception.

The problem with the non-forest habitat of the martial eagle leads us to inquire if another comparable bird, with a forest habitat, exists. Again, the answer is a qualified yes. The crowned eagle,



61. Photography of the Crowned (Hawk) Eagle, *Stephanoetus coronatus*.

Stephanoaetus coronatus, fits the bill rather well, in spite of the fact that it has a somewhat lesser wingspread; the average for the female (also larger than the male) is 1.7 metres (64 inches). The body is the same size as the martial eagle. The birds are black above, with handsomely banded black and buff undersides, spotted thighs, and extremely powerful feet. The name crowned eagle comes from the conspicuously crested head. The bird ranges over both jungle and forested areas, including those of West Africa. It was listed by Carl von Linné under the name *Falco coronatus* in 1766. In the *Catalogue of the Birds in the British Museum* (1874-98) it is listed under the name *Spizaetus coronatus*.

This magnificent eagle lives up to native descriptions of Ngoima even better than the martial eagle. A fierce-looking, forest-loving bird, it is bold and rapacious, hunting and killing animals larger than itself—pigs, lambs, goats, small antelopes, and monkeys. It drops on its prey like a stone from above, only opening its wings at the last moment. The huge and deadly claws are more powerful than those of any other African eagle. In his book on birds of prey, Peter Steyn states that the hind killing-claw of the crowned eagle is as thick as a man's little finger. That information certainly corresponds to the emphasis our informants placed on the mighty and deadly claws and feet of Ngoima, which they compared in size to my hand and forearm. Steyn writes that the bird is capable of killing a bushbuck four to six times its own weight (18 to 20 kilograms, 40 to 50 pounds). In one instance he reports that the eagle launched its attack on vervet monkeys from a distance of 150 metres (500 feet), used cover to make an undetected approach, and was next seen bursting skywards through the jungle canopy from below with a monkey grasped in its talons.

The crowned eagle is never seen, except by hunters in the forest, and then very rarely. Nests are often 30 metres (100 feet) from the ground at the top of the tallest trees. Nests are built from sticks lined with gum leaves and typically are 2 to 3 metres (9 feet) in width and depth. Examination of one nest in Zimbabwe by wildlife artist D. M. Henry revealed the presence of a human skull belonging to a young African. According to Steyn occasional attacks on

young humans by the crowned eagle have been carefully authenticated. He cites a case in Zambia where an immature crowned eagle attacked a 20-kilogram seven-year-old schoolboy who was on his way to school. He was savagely clawed on head, arms, and chest but the boy grabbed the bird by its neck and was finally saved by a peasant woman who killed it with a hoe. Because the boy was nowhere near a nest the attack can only have been predatory. Obviously, the Africans' fears of this bird are well founded. Descriptions of the Ngoima given to us by the Congolese match the crowned eagle in every respect, except for wingspread, which we may assume was overstated.

Malombo and other Interesting Plants

No relict species of animal could have survived to this day in the Likouala swamps without the benefit of a stable ecological niche. The characteristics of such a favorable environment should include a stable climate; freedom from cataclysms such as earthquakes, floods, or glaciations; freedom from possible destruction by evolving predators or susceptibility to new infectious agents; and, lastly, a stable food supply. If there were to be any changes in the food supply, they must be sufficiently gradual over a period of 60 to 70 million years. We know that such shifts have occurred often throughout the evolutionary history of the animal kingdom. However, the presence of a stable, relatively unchanged food source for our relict species would certainly make our hypothesis all the more viable.

The *malombo* is just the kind of plant our relict animal—and our hypothesis—requires. It belongs to the dominant plant life of our geological era, the angiosperms, or flowering plants, and its evolutionary origins go back well into the Cretaceous. Flowering plants first became prominent in the Lower Cretaceous 130 million years ago. In the Upper Cretaceous and the Tertiary periods they had already become dominant. It could well be that the evolutionary history of our mystery animals is closely related to that of the flowering plants, as is the case with so many other groups of animals, such as birds.

When James Powell and I brought back specimens of malombo from the first expedition, the first order of business was to identify them critically. Prior to our obtaining the actual specimens, James had discussed the matter with one or two botanical experts who suggested that the malombo was probably a species of *Landolphia*.

I found without much difficulty that the botanists were right and that several species were quite common in the African rain forest. The family to which they belong, the Apocyanaceae (or dogbane), includes herbs, shrubs, woody climbing vines (lianas), and trees of moderate height. They most closely resemble the gentian family (Gentianaceae) and the milkweeds (Asclepiadaceae), having a milky latex. The major difference between these two groups is that the *Landolphia* have one stigma (the part of the flower that receives the pollen grains) instead of two. All the plants discussed in this chapter, including the arrow poison plants, belong to the *Landolphia* group. There are about 1,300 known species, many of which have provided primitive people with extracts of deadly poisons.

The fruits of the *Landolphia* range in size from 2 centimetres (1 inch) to 25 centimetres (10 inches), depending on the species. Most are rounded or pear shaped although some take on a peculiar cylindrical form. Neither the fruits nor the milky-white, sweet sap is poisonous. In fact, jungle people as well as some animals, include the fruits in their diet. It has been found that the food value of *Landolphia* for an herbivore is excellent, except for the protein content, which is quite low. Consequently, mammals must eat large quantities of the fruit, less if a reptile. It is almost certain that, regardless of whether mammal or reptile, the animal would have to be a ruminant, that is, one with cellulose-digesting bacteria living symbiotically in its digestive tract. The flowers of these plants are quite lovely, being arranged in more or less short, sometimes dense, clusters and terminating in short leafy branchlets.

The woody, climbing lianas grow more than 100 metres (300 feet) up trees along the rivers and may be 30 centimetres (1 foot) in diameter. The milky-white sap from these plants can be used to make a fairly useful rubber, although not as satisfactory in all respects as the *Hevea* plants (the main source of commercial rubber). During World War II some attempt was made to use the *Landolphia* sap as a substitute for commercial rubber, which was in short supply.

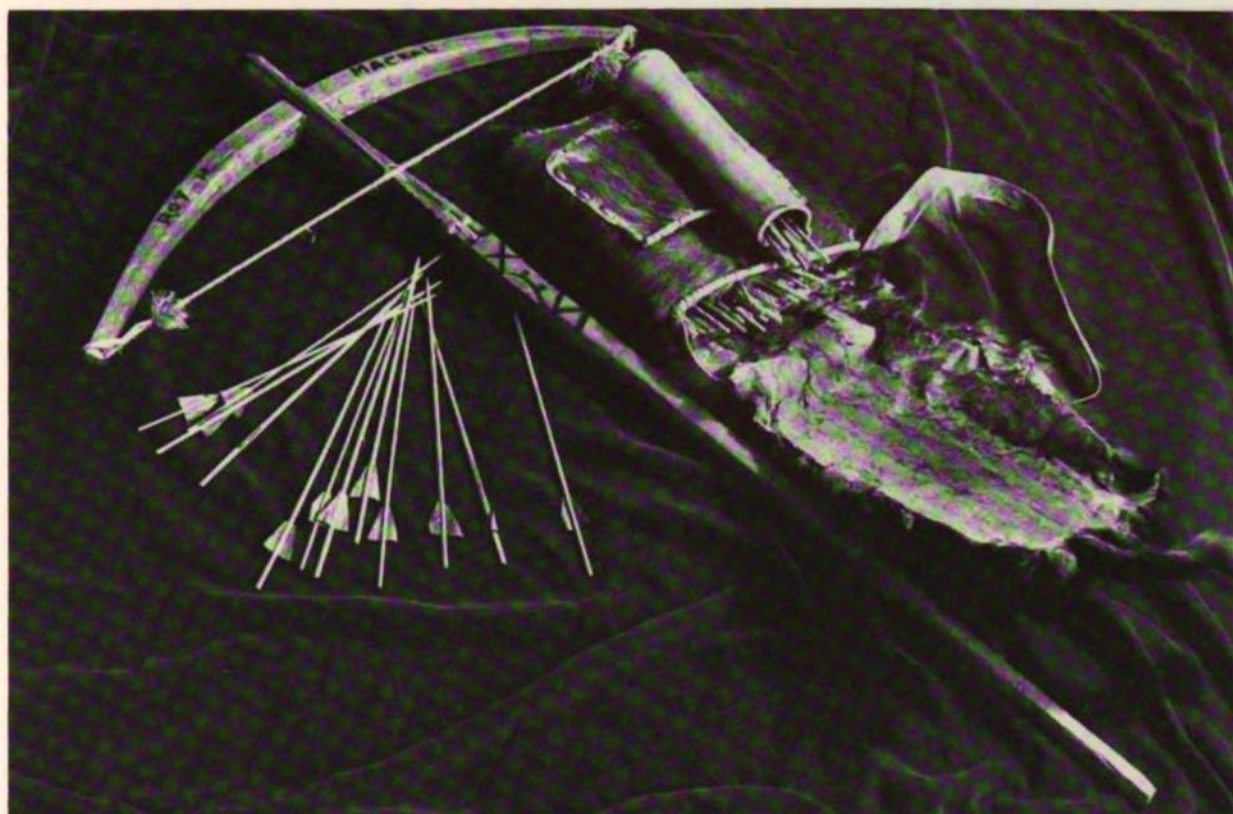
In the area of our exploration, we found at least two species of *Landolphia* that were identified as food for the Mokele-mbembe. The one most commonly referred to as malombo was *Landolphia mannii*, the species that seems to predominate in the area, including the vicinity of Impfondo. On the Sanga and Likouala-aux-Herbes rivers we found the species *Landolphia owariensis*, which was also referred to as malombo.

Landolphia dulcis is also present around the town of Quesso on the Sanga River. The French cite this locality as the extreme easterly range of this plant. Three closely related species are reported by the French: *Clitandra cymulosa* at Impfondo, *Orthandra cirrhosa* around Quesso, and *Saba comroensis* along the Sanga and Ubangi rivers.

A careful botanical survey of the area would undoubtedly provide additional varieties and subspecies. While *Landolphia mannii* is ubiquitous in the Mokele-mbembe area, *Landolphia owariensis* has by far the greatest range, including Gabon and much of West Central Africa. The fruits of this plant may well have been what Sanderson was shown and identified as the food of the *N'yamala*.

According to our pygmy informants, malombo was the essential food of the Mokele-mbembe. From a botanical and nutritional point of view, the creature could at least marginally subsist on it, providing they have a ruminant-like digestive system.

Another kind of plant was just as important to the pygmies themselves, although not as a food source. Throughout the area we visited pygmies hunted with crossbows. These bows fired arrowlike darts feathered with a leaf. The tips were carved with a raised spiral which served to hold a large amount of poison when dipped into the arrow-poison liquid. Livingstone's *Narrative of An Expedition to the Zambesi* was the first to state that an arrow poison, called *Kombi* by the Manganja, was prepared from a species of *Strophanthus*. Poisons are extracted from the seeds of the plants and the three most commonly used species are *Strophanthus kombe*, *S. gratus*, and *S. hispidus*. The genus *Strophanthus* includes a very useful group of plants, yielding vegetable silk and medicaments as well as poisons; in many cases these also make attractive ornamental



62. Pygmy crossbow, arrows and quiver.

plants. *S. gratus* is a woody climber with shiny leaves and handsome red flowers ranging in colour to almost white; *S. hispidus* is a shrub with long, very whip-like branches, often becoming a climber (the flowers are yellow, spotted purple in the throat and this species is actually cultivated as a source of arrow poison); *S. kombe* is a rambling shrub or a climber similar to *S. hispidus*.

The poison widely used in hunting and sometimes in warfare, must be prepared fresh as it loses its potency in the tropical heat. This is actually an advantage because cooking an animal killed by a dart tipped with *Strophanthus* liquid renders the poison harmless. The active agents are the strophantins, chemical molecules closely related to digitalis, which provide a modern medicine used to treat heart patients. To confirm this, k-strophantis- α , a substance extracted from *Strophanthus kombe*, together with a commercial preparation (G-strophantin), was submitted to Doris Tse-Eng in the laboratory of Dr. Vincent P. Butler, Jr., at Columbia University. A comparison was made with digoxin, a derivative of digitalis, against which effective antibodies had been developed by

them. Ms. Tse-Eng reported to me that, on a molar basis, my poison sample was 55 percent as immunoreactive as digoxin, suggesting that their digoxin antibody material would be a very effective antidote against the *Strophanthus* poison. Obviously such an antidote would be a good thing to keep on hand in Congolese medical stations where a possible exposure to the arrow poison might occur. The poison is extremely lethal; when injected into the vein of a cat, the LD₅₀ is 0.95 milligrams per kilogram. LD₅₀ means the dose level at which 50 percent of the test animals will die. For an 80-kilogram (180 pound) human it would take only 7.6 milligrams (about 1/100,000 of an ounce) to kill.

The crossbows used by the pygmies are another serendipitous discovery. We had been told by a variety of African experts that the central West African pygmies are not acquainted with the crossbow and so we were particularly careful to document our finding. We were able to bring back several examples of these bows, including a supply of the hunting arrows. We found they were very effective at a range of 15 to 30 metres (50 to 100 feet), even in our hands. In fact Gene impressed the pygmies greatly with his crossbow accuracy. Earlier, during our first expedition, we were concerned about the possible use of these bows against us as we penetrated certain areas. We had taken to heart the stories about the *Bangombes*, said to be terrible pygmies who allegedly killed intruders in their territory, stringing up dismembered parts of their victims' bodies on trees. It was with this possibility in mind that I had pursued the matter of an antidote to the poison with Dr. Butler at Columbia University.

To our relief we discovered that the *Bangombes* were in reality just as benign and friendly as other pygmies. I can only assume that if there ever was any truth to the stories about the ferocity of the *Bangombes*, it was in the distant past. I suspect that when the Bantus were entering the area hundreds of years ago, followed by the French colonial administration, pygmy resistance to the "invaders" might have given rise to these tales.

As a group the plants known as the Apocyanaceae are diverse and interesting, especially as important chemical compounds may be

derived from them. In-depth botanical surveys of the little-known or unknown species in the Likouala swamps could well produce useful, even spectacular discoveries.

What does it all mean?

By now, most readers will have come to some conclusions about the material I have been presenting. When all is said and done, it must be acknowledged that a great deal of subjectivity colours one's opinions, no matter how objective one strives to be. I admit that my own views are tinged with some romanticism, but certainly not to the extent that I would endure extreme hardship and danger, even risk my life, to pursue a dream with no basis in reality. However, I do wish to present a range of opinions, many of which have much to commend them, although they do not correspond to my own perceptions.

First, there is the view that the whole matter of the possible existence of one or more species of large, unidentified animals in West Africa is pure nonsense and that no time or effort should be expended even discussing the subject. Such a conclusion, made *a priori* without reviewing the evidence, is unacceptable to all reasonable people, including scientists. If, however, the data have been carefully studied—or at least considered—and such a conclusion reached, it can be accepted as reflecting informed judgment, regardless of whether one agrees or disagrees. I have no quarrel with anyone who examines evidence and comes to a conclusion different from my own. For that person, the matter is settled. Those who don't fall into that category will want to read on.

There appear to be two major types of systematic zoologists: the splitters, on the one hand, who tend to see multiple species, varieties, races, *ad infinitum*. At the other extreme, we have the lumpers, who strive to amalgamate and synonymise rather than split animal forms. The splitter would probably prefer to proceed on the hypothesis that at least seven different kinds of animals exist in the Likouala swamps, two of which, the giant turtle and the

monkey-eating bird, have been identified with some certainty. The giant crocodile would be considered an unknown species different from the ordinary Nile crocodile. Probably each of the remaining four animals reported by our informants would also be considered different unidentified animals. In my opinion, this analysis is unrealistic, except for the monkey-eating bird and the giant turtle. All our analyses and comparisons have been with known animals, living or extinct. I don't reject outright the idea that a previously unknown kind of animal may be involved in a particular case, possibly representing a totally new family. I prefer to say it is possible but not probable.

On the other hand, the skeptical lumper has simplicity on his or her side. Although simplicity is most desirable from a scientific viewpoint, we must be careful to remember that nature does not always conform to our wishes. The extreme lumper position would be that the Mokele-mbembe, the Mahamba, the Nguma-monene and Mbielu-mbielu-mbielu are all one and the same thing. However, even the most extreme lumper would have difficulty including the Emela-ntouka. Therefore, the lumpers might conclude that there was one possible unknown animal, the Emela-ntouka, and that outsized crocodiles accounted for the rest.

I agree that the Mahamba is very likely an exceptionally large variety of the Nile crocodile. Further, I believe that the Emela-ntouka is a distinct and separate unknown animal, most probably a variety of a semi-aquatic rhinoceros. The only serious problem with this identification is the alleged long, heavy tail. As this is a certain feature of the Mokele-mbembe proper, it seems reasonable to conclude that, just as Emela-ntouka's horn is sometimes associated with the Mokele-mbembe, the heavy tail of this animal is sometimes incorrectly attributed to the Emela-ntouka.

We are now left with the Mokele-mbembe, the Mbielu-mbielu-mbielu, and the Nguma-monene. I believe the description of the Mokele-mbembe is accounted for in all respects by an identification with a small sauropod dinosaur. If, instead, the Mokele-mbembe is a giant monitor lizard, it would have to be a very strange lizard indeed, quite unlike any known forms, living or

extinct. Furthermore, this strange new lizard would have to be a plant eater, a phenomenal exception among all the known monitor lizards, which are invariably carnivorous.

The remaining questions concern the Mbielu-mbielu-mbielu and the Nguma-monene. First, could one or both of these reported creatures be the giant crocodile? That idea appears far more plausible than attempting to link or identify them with the sauropod-like Mokele-mbembe. De la Ruvière's sketch of the Maika creature he saw (Appendix G) lends credence to this identification, as his sketches do indeed look crocodilian. But they also look lizard-like—in fact very much like a monitor lizard, especially the longer-necked species. In an overall assessment of the relevant descriptive data, the lizard idea cannot be easily dismissed.

As a working hypothesis, I prefer to identify De la Ruvière's creature of the Maika swamp, the Mbielu-mbielu-mbielu, and the Nguma-monene as large monitor lizards. Are there two different types, one quite typical except for unusually large size and another more snake-like, perhaps closer to the common ancestor of the boid snake-monitor? The splitter would, of course, favour such an interpretation. At the present stage of our knowledge, I prefer to entertain the idea of only one lizard-like creature, although I would be delighted to be proved wrong.

In summary, I conclude that, hidden in the depths of the Likouala swamps are three large, unidentified animals. The first is possibly a small surviving sauropod dinosaur (Mokele-mbembe); the second, a new species of aquatic rhinoceros (Emela-ntouka), and, third, a very large, unknown, snake-like monitor lizard (Nguma-monene or Mbielu-mbielu-mbielu). If any one of these animals could be discovered and catalogued, a marvellous contribution to zoology in general, and cryptozoology in particular, would be realised. However, even the three already known animals—the giant turtle, crocodile, and monkey-eating bird—are of enormous zoological interest. They are rare as well as unusual animals and may offer us some unexpected surprises through further research.

Appendices

APPENDIX A

Report by J. Grandin on his Trip to Lake Tele, 1976 (slightly edited).

Two interior architecture students, Messrs. Philippe Rolland and Jean François Theisse, who had asked the Paris office for logistic support for a hydrological mission conducted by the ORSTOM to Lake Tele, participated in a boat trip to the Botoulai and Epena on the Likouala-aux-Herbes.

Following the formalities (and an initial gauging) in Epena, we returned to Boa, 33 kilometres down from Epena, which is the closest village to the lake and whose inhabitants consider themselves its owners.

We left Boa on 17 October 1976 with 14 porters and five women who brought with them six pieces of camping gear, the Zodiac Mark II, the 20-horsepower Johnson engine and 60 litres of gasoline for mixing, 21 of which were for the outboard motor.

It took us two and a half days to reach the lake. Initially we were delayed by the hunt and the difficult trail which frequently ran through large swamps. The final kilometres are the most difficult, constituting a circle of swamps surrounding the lake. Air roots retain leaves and straw which, as they decay, form a layer of humus under the water. One is forced to walk on stilts laid on top of this humus, which, during that time of the year, is 40 to 50 centimetres underwater.

This flooded forest stops suddenly at the edge of the lake where the trail leads to a first campsite, consisting of a hut on stilts above and at the edge of the lake.

We carried our gear and the personnel took the Zodiac to the southern edge of the lake (the trail stops roughly halfway to the eastern side of the lake) and set up camp (hammock for us and the tarpaulins for the personnel).

We explored the lake from 20 through 23 October 1976. We toured it and took down the names of all the tributaries. We then crossed it along its two diagonals to measure the depths. This was followed by a tour at a distance of roughly 500 metres offshore; also in order to measure the depths. Finally, we made a futile effort to locate the deep areas as pointed out by the eldest of our porters). We also took water and soil samples (from the lake bottom).

The result of all these efforts was the following: the lake is no more than 3 metres deep. The borders, which are fixed by the intertwined open-air roots which keep the humus, are clearly visible and the lake begins at a depth of about 1.5 metres.

We were able to establish the absence of magnetic influences, as the arm of the compass steadily pointed in a direction consistent with the environment.

One of us developed two of the many films which were made of the lake. The negatives are clear, not dull as we had been told they might be. According to the Boa people, the water in the lake is known to have healing properties which we were unable to verify. It is certain, however, that the many scratches on our bodies collected along the trails healed without complication despite the extreme humidity at the campsite.

Everybody (with the exception of Judge Alphonse) suffered from headaches, fever, pains and nausea similar to the symptoms of marsh fever. Apparently this happens quite often to people who camp there. The level of the lake does not seem to vary in the course of the year. However, the mud is said to dry (enormously facilitating the crossing during the dry season), which appears inexplicable, bearing in mind that 30 kilometres away as the crow flies there is a level variation which could be in excess of 6 metres at Epena, whereas the swampy area consequently retains its level or, at most, shows a very slow angle of incline and seems to stretch without a break between the strips of solid ground which support a large equatorial forest.

Finally, in one of the tributaries to the north-north-east, the women fish with baskets, catching very small fishes, 2 to 3 centimetres long, part red and part white (approximately half and half), which are not found elsewhere. We took one sample which was lost. We asked the riverine population to send us some the next season. The lake is very rich in fish, which explains the presence of campgrounds (four on the eastern shore) where the population of Boa visits regularly during the dry season.

We returned to Boa on 26 October after a two-day march and a one-day stop because of a bout of fever suffered by one of us.

The welcome was very friendly and the ambience excellent. However, we think that the riverine population hoped that we would discover unsuspected wealth (oil, gold, diamonds). We had to caution them against such illusions and asked them to wait for the results of our measurements and studies, specifying that it seemed quite improbable that opportunities other than fishing on Lake Tele existed.

The legend or, more precisely, two legends on the origin of the lake leads one to believe that it was formed several generations ago. According to one of them, the Babinga pygmies, who camped near a swamp, had met

with the inhabitants of the neighbouring village (the old Boa) to tell them that the trees stopped at the edge of the swamp, something which had frightened them. After staying for a while near the village, taking the advice of its inhabitants, they went back to their swamp and found that a lake had been formed. According to the other legend, again the Babinga are said to have wounded an animal which had sought shelter in the swamp and had made the lake by thrashing around in its agony. All the Babinga who had participated in this hunt are said to have died and we were told that we had met with one of the descendants of the survivors. These tales were recorded in Lingala and, if necessary, could be used as reference. The recording was made by a common plea judge who came with us to the lake.

Drafted in Brazzaville on 10 December 1976

J. Grandin,
Hydrological Service,
BRAZZAVILLE ORSTOM CENTRE

APPENDIX B

Report by R. P. Mackal and J. H. Powell on the Mackal-Powell Likouala Expedition, 1980 (edited from an English translation of a French original, dated 26 February 1980, from Impfondo).

To: A. Mouele, Commissaire Politique,
Region of the Likouala,
République Populaire du Congo.

Purpose:

To establish in so far as is possible whether the reports of the Mokele-mbembe refer to a myth or real animals. If the latter to determine whether the animals are extinct or still in existence and to obtain as much information as to their nature and habitat as possible.

Background

In 1776 the Abbé Lievain Bonaventure Proyard published a book entitled *Histoire de Louango, Kakongo, et autres royaumes d'Afrique, rédigée d'après les*

mémoires de préfets apostoliques de la Mission française which contained reports received from several prelates, attempting to establish their missions in ... what is now the Peoples Republic of the Congo, Gabon, and Cameroun.

Abbé Proyard reported that the missionaries, while passing through a forest, observed the track of an animal which they did not see, but which must have been monstrous: The marks of the claws were noted on the ground, and these formed a print about 90 centimetres in circumference. The arrangement of the footprints indicated that the animal was walking, not running, and that the distance between its footprints was 2.1 to 2.4 metres. The Belgian zoologist, Bernard Heuvelmans, estimates that this establishes the size of the animal as intermediate between that of a hippopotamus or rhinoceros and an elephant. He points out that only the largest elephants carry their feet at a distance of 2.1 to 2.4 metres apart. None of these animals, of course, has claws.

Later, Alfred Aloysius Smith ("Trader Horn") wrote of reports of a similar animal which he heard about while trading up and down the Ogoué River in Gabon in the late 1800s. He was told that the *Jago-nini* was still in the swamps and rivers. He states that he believes this animal to be the same as the *Amali*, whose footprints he had observed, about the size of a frying pan with three claws. He also states that there are drawings of the animal in Bushman caves.

More information comes from Captain Freiherr von Stein zu Lausnitz, leader of the Likouala-Congo Expedition of 1913-1914. This is the region now known as the République Populaire du Congo. The information consists of reports by experienced guides and trustworthy Africans. The reports refer to the Lower Oubangui, the Sangha, the Ikelemba, and the Congo.

Its preferred habitat would seem to be the frequent deep pools excavated by whirlpools at sharp, narrow bends in the rivers.

By choice, the creature is said to retire into the depths of the numerous caves hollowed out below the water level in the clay banks. Even in broad daylight it climbs the shore in search of its strictly vegetable food. The favourite plant of the beast is a sort of riverside liana, with large white flowers, which secretes a rubbery latex, and bears nut-like fruits resembling apples. At the Sombo River he was shown, beside a heavy growth of these plants, a great breach which the animal had opened up in the dense vegetation lining the bank, in order to get at its food. However, since there were also numerous tracks of other animals it was impossible too recognize any particular spoor with certainty.

The animal is said to have a smooth skin, brownish-grey in color. Its size is approximately that of an elephant, or at least that of a hippopotamus.

It seems to have a long, flexible neck, and a single tooth, but a very long one, sometimes described as a horn. A few also spoke of a very long tail, as powerful as a crocodiles. Canoes approaching the beast are immediately attacked and capsized, and the occupants killed, but not eaten.

In 1938, a German scientist, Dr. Leo von Boxberger, obtained similar reports.

In 1976 and 1979 James Powell, while studying crocodiles in Gabon and Cameroun, heard additional reports in these areas.

Results

From discussion with over 30 Congolese (including pygmies) in the Impfondo and Epena areas we were able to confirm practically all of the detail described earlier, including the alleged food plant of the animals, the "malombo," of which we obtained a specimen and which has tentatively been identified as a species of *Landolphia*.

Eyewitness descriptions establish the largest of these animals as up to 10 metres in length, long tail, reddish brown to grey in colour. The thickness of the long neck ranges from that of a man's arm to the thickness of a man's thigh. In some cases a rooster-like comb was described as being present on the head.

A number of miraculous aspects were attached to the more factual descriptions, including the widespread belief that if a mokele-mbembe is observed nothing must be said about the event or death will follow. This belief of course contributes to the difficulty of obtaining information.

A number of other reports of strange animals were obtained. It is not clear whether these refer to different animals or are different versions of the mokele-mbembe.

Most importantly we were able to confirm and establish more details concerning a vague report at Impfondo that two or three animals had entered Lake Tele near Epena some 20-25 years ago and that one of the animals had been killed there.

We obtained reports at Epena that two animals had entered Lake Tele in 1959 and returned to the Bai River (also known as the Tibeke). The animals apparently moved back and forth between the river and the lake disturbing the fishing activities of the pygmies. They proceeded to construct a stake barrier across the molibo (one of the 4 or 5 riverways connecting the lake to the river, through which the animals were traveling in and out of the lake). As one of the animals was at the barrier attempting to enter the lake the pygmies killed it with their spears. It was then cut up, the task being described as endless because of the long head-neck

and tail of the animal. It was alleged that all those who participated in the killing (and eating?) of the animal died. Apparently the pygmies in the area are very reluctant to discuss the episode.

Conclusions

From the reports received we conclude that mokele-mbembe refers to a real animal, not a myth, although a variety of magical or miraculous aspects are attached to the tradition. Our inquiries in the Impfondo and Epena areas suggest that the original more widespread range of these creatures has been greatly reduced during the last two hundred years and is now centered in the Epena district along the Likouala-aux-Herbes, Lake Tele, and the Bai River and its tributaries. The animals appear to have been rare even in the recent past and may now be extinct, although we obtained eye-witness reports as recently as 1979.

From the descriptions of the animal, we conclude that they refer to a species unknown to science as a living form.

Dr. Roy Mackal, Ph D,
Dept. of Biology, University of Chicago
Mr. James H. Powell, Jr,
Zoologist and cryptozoological researcher

APPENDIX C

Preliminary Report by R. P. Mackal, J. Wilkinson, R. Greenwell, and M. Agnagna on the Mackal-Bryan Likouala Expedition (in Cooperation with the Ministry of Water and Forests, People's Republic of the Congo) 5 December 1981.

Purpose

To obtain information and evidence (other than anecdotal) which could explain the persistent and consistent reports of unidentified animals, referred to by the inhabitants of the Likouala as Mokele-mbembe.

In order to carry out the investigation, a team of scientists and support personnel was assembled:

Scientists

Dr. Roy P. Mackal, University of Chicago—Biologist and expedition leader

Dr. Justin Wilkinson, University of Arizona—Ecologist and geomorphologist

Mr. J. Richard Greenwell, University of Arizona—Anthropologist

Ms. Marie Womack, Santa Monica, California—Photographer

Mr. Marcellin Agnagna, Direction du Parc Zoologique de Brazzaville,
Biologiste Ministère des Eaux et Forêts

Assistants

Pascal M'Beke, Ministry of the Interior—Radio communications

Georges N'Dossa, Ministry of the Interior—Security

Celestin Kembe, Ministry of the Interior—Security

Pastor Eugene Thomas, Mission Evangelique, Impfondo—Interpreter

Marien Ikole, Impfondo—Assistant

Eduard, Impfondo—Assistant

Edmond, Impfondo—Assistant

The expedition carried enough equipment and medical supplies for subsistence in the bush for six weeks. Food was obtained by hunting and from the indigenous population. Two large piroques were used to carry the equipment and the participants. The piroques were outfitted with 40-horsepower and 9.5-horsepower outboard motors. Spare 40-horsepower and 7.5-horsepower motors were carried. A Vexilar video sonar unit Model 990 was carried for the purpose of measuring depths and for underwater searches for large animals.

Narrative Overview

The expedition departed from Impfondo on November 17, 1981, and returned on December 1, 1981.

The route of the search was up to the Ubangi River to Mohitou through the Djemba Canal into the Tanga River, to the Likouala-aux-Herbes River to the confluence of the Bai River. Then the Bai was followed upstream to some 7 kilometres beyond Mougouma Bai. This was the limit of the excursion dictated by the maximum gasoline which could be carried, 460 liters, replenished at Epena.

A base camp was set up at Kinami. Much valuable information was obtained from the inhabitants along the rivers. Invaluable assistance was received at Epena, Dzeke and Kinami.

Cryptozoology

Many of the locations identified as former Mokele-Mbembe encounter sites were probed with sonar. In all cases only fish were detected, except in one deep pool where three crocodiles were also identified.

Just north of Dzeke a hunter with 40 years of experience took us to a place several hundred yards from the Likouala-aux-Herbes River, where a Mokele-Mbembe had been reported until June of 1980. He reported that the populace of Dzeke was afraid of the animal and remained clear of the area. However, when wood was cut near the place the noise allegedly disturbed the animal and it left the pools it had been inhabiting. He found its tracks, a trail of broken branches and laterally flattened grass, and footprints about 25 centimetres in diameter. He followed the tracks until they entered the Likouala River.

It occurred to him that it might be an elephant. However, crossing the river he found no trace on the other bank; this proved to him that it was neither an elephant nor a hippopotamus. The width between the two ends of the crossing was some 3 metres. His expert experience proved to him that no known animal could have left such tracks in crossing (grass crushed on the ground, twigs and little trees broken, etc...)

Additional reports were drawn up, including the fact that another Mokele-Mbembe was brought down in the direction of Pikunda, where the river Sombo flows into the Sanga. The date of the event was not determined. Nevertheless, it appears to have taken place recently. Reports of sightings of Mokele-Mbembe have not been received in very recent weeks. Some villagers have mentioned quite discreetly to the Congolese members of the expedition that they were well familiar with the Mokele-mbembe but were reluctant to share their secret with the Americans for fear that the latter might destroy them and wage war. In the village of Boha a young boy pointed out to us that he knew where one could see a Mokele-mbembe at a given time not far from the village, but was unwilling to take us there for fear of being attacked by the elders. Some peasants tried to make us believe that one had to operate mystically to see the Mokele-mbembe. The African has remained an egotist and tends to adopt a mystifying approach to whatever he is unwilling to let others know; it is true, however, that a myth is usually related to something natural. A lagoon juxtaposed to Likouala may be found in Boha, in the grasses of which at a specific time of year one can hear from the village the shouts of an animal which, according to them, is the Mokele-mbembe. Such shouts vary in tone from the mooing of an ox to the crying of a dog.

All witnesses we came across who claimed a visual sighting (those who came to see us, a maximum of five) confirmed that the most favorable period for observing one of these animals is during the dry season. It is in the course of their movements that one can observe them best. They live in the lagoons and the swamps in the forests paralleling the current.

Of particular interest in the Likouala was the observation of faunal species along the route that the expedition took. Fish, reptiles, amphibians, birds and mammals were observed. Fish were represented in great quantity in the river systems, and appeared to serve as a substantial food source for the population. No attempts at identification or classification were made. Reptiles were best represented by snakes, which are usually killed immediately by the population when encountered. Because of the high reproductive rate, however, there is little danger of species depletions. Many snakes were observed, even close to human habitation. Lizards were plentiful and some crocodiles were tracked by underwater sonar. Amphibians were not observed in large quantities, probably because of their elusive nature.

Many birds were observed, but they were represented by only a few genera. Kingfishers, herons, geese, and the birds of prey were the most common. Hawks were plentiful, but eagles were less common, and might possibly be declining in number due to human predation. It might be important to instill in the population both the ecological and esthetic importance of preserving eagles in the Likouala. It was noted that, in general, bird species were less plentiful in the Congo Basin than in the Amazon Basin of South America, but that is probably due to already understood ecological causes.

Mammals, for which Africa has become world-famous, were not observed in great quantities. The principal species observed were monkeys, which the population harvest for food in substantial quantities. It appeared that monkey populations in the environs of villages have been decimated and that longer and longer forays into the forest to such monkey colonies are necessary. The depletion of monkey species worldwide has been of great concern to many governments, and the depletions in the Congo appear to represent the early stages of eventual primate species depletions. Fortunately, the vastness and isolation of the Likouala region offer some sanctuary to monkeys. Gorillas and chimpanzees were not observed, although attempts to do so were made. Due to their very low reproductive rate (i.e., prolonged gestation and maturity), these apes could be in very real danger of eventual extinction, and it is proposed that strong conservation efforts be implemented before the situation becomes critical.

No larger mammals (i.e., elephants, hippos) were observed. While hippos seem to be represented in adequate numbers, their visibility varying according to the season, elephants have been undergoing extensive depletion in the Likouala. If the present rate of depletion continues, the

elephant will cease to exist as a Congolese animal within the foreseeable future. The world trade in ivory is the principal cause of such elephant killing. As the biological turnover of elephants is unfortunately very low, the immediate economic benefits of ivory harvesting overwhelm the long-term benefits to the Congo of maintaining normally reproducing elephant communities. It is imperative that the Congolese government ensure the protection of the elephant by both enforcement and incentives. Such a program is expensive to implement, but it is necessary if the government hopes to maintain the Sikouala as one of the last of the natural biospheric preserves on the planet.

Geomorphology and Vegetation

Hydrography. 1:200,000 scale maps and the 1:50,000 aerial photographs (Epena to Edzama) proved to be generally accurate. This indicates that little change has occurred in river patterns in the 18 years since the base photography was completed.

The areas inundated during the flood season extend well beyond the river, affecting great areas of grassland (Lisobe). Non-inundated grassland appears on the aerial photographs as darker-tinted areas, although *all* grasslands are shown as seasonally inundated on the 1:200,000 maps.

In the area of the canal, the seasonally inundated forest floor was under water in mid-November, but drained by early December.

Tributary mouths along the Likouala-aux-Herbes are choked with floating grassland during the flood season, making maps unusable for navigation at river confluences.

The existence of a true river floodplain is still in doubt and probably does not coincide with the grassland/forest boundary.

Depths were taken in the Likouala-aux-herbes and the Bai rivers by means of a sonar device. From these and analysis of stream morphometry it will be possible to calculate bankful discharges of the river.

Sonar data shows the wide occurrence of at least three superficial sedimentary layers in the Bai and Likouala-aux-Herbes, probably a silt-clay layer, a more compact sand-silt layer, and the country rock underlying these. Interestingly, sonar data taken on the Ubangi just north of Impfondo shows a constant five layers, occasionally more, with internal compaction features vividly displayed.

The only visible topography is that along the rivers at those few points where villagers occupy high ground (up to 8 metres).

Vegetation. The major phytogeographical problem is the explanation of the forest/grassland boundary. Since the 1:200,000 maps of the area

(Impfondo, Quesso, Pikunda and Mobenzele) do not as yet display contour information, it was necessary to examine topographic effects on vegetation in the field. At the macroscale, it is concluded provisionally that the forested areas occupy slightly higher ground, and the grassland areas lower ground. At the mesoscale, the forest boundary zone seems controlled by locally high ground related to the very large termite mounds which lie between the higher forested area and the lower grassed area. At the micro level, yearly burning of the grassland may well be the major control of the forest boundary. These relationships are tentative and need further study.

It is probable that the boundary is dynamic and fluctuates with the intensity of burning and drought.

Archaeology

An archaeological site was discovered in a recent 4-meter man-made face in the bank of the Ubangi River on the property of the Mission Evangelique in Impfondo. Pottery sherds and charred organic remains occur within the top half-metre of a 20-metre-long exposure. Two shafts of disturbed earth with sherds and organic remains extend down to 2 metres below the surface.

Approximately 20 sherds, some decorated, were recovered from the exposure surface. No excavation beyond this was attempted, though many sherds probably remain.

The sherds have been deposited with Dr. Lanfranchi of the Archeology Department of Marian Ngouabi University. Charred organic remains were recovered for possible 14-carbon dating. It is expected the site is a fairly recent Iron Age site.

Conclusions

The additional evidence obtained during the second Likouala expedition reinforces the hypothesis that real animals are the basis for the reports of the Mokele-mbembe.

It appears that the animals do not inhabit the rivers per se but rather the pools and swamps adjacent to the rivers. Occasionally they enter the rivers in order to travel to new locations. It is during these excursions that they are most often observed, because most of the populace live along and travel on the rivers rather than in the swamps.

Issued in Brazzaville 5 December 1981

Dr. Roy Mackal

Dr. Justin Wilkinson

Mr. Richard Greenwell

Mr. Marcellin Agnagna

APPENDIX D

Final Report by H. A. Regusters on the Regusters African Congo Expedition in République Populaire du Congo, September 7, 1981 through December 9, 1981 (extracts only).

Introduction

The primary purpose of this expedition was to undertake an investigation of the probability of the existence of an unidentified species of animal, reported to inhabit the jungles of Equatorial Africa. For years, the reports have emanated from the countries of Cameroon, Gabon, Central African Republic, Uganda, Zaire and the République Populaire du Congo. Initial planning of the expedition was commenced in January 1981, by Herman A Regusters, an American aerospace engineer.

For the purpose of the investigation, the République Populaire du Congo was selected because of the frequent localised reports from the Likouala Region of that country. Attention was focused on Lac Tele because of its isolation from populated centres. Also, if the animal still existed, this land-locked body of water would offer the best chances of finding it in a reasonably confined area. Additionally, there are the commonly known stories of the reported killing of two of the creatures at the lake, in the 1930's, by forest-dwelling natives who lived there at that time.

Therefore, the expedition was designed with an objective of systematically finding a practical route to the lake, based on the data currently available. Also considered was the maximum safety for the participants and utilisation of as much state-of-the-art technology as was available to the mission. The original concept envisioned four members who would be inserted into the lake area by amphibious aircraft. However, this concept was later modified because of the lack of physical data relating to Lac Tele. Some low resolution LANDSAT satellite data were made available by the California Institute of Technology's Jet Propulsion Laboratory to support the preliminary geophysical assessments.

Had the extensive use of aircraft proved practical, the original plans would have included extending the investigation into Gabon and the Central African Republic by part of the scientific team. Nevertheless, an invitation was extended to these countries to have their scientific community participate in the expedition.

In all, over thirty American and foreign organisations donated equipment and material in support of the expedition; and the financial backing was obtained through donations from predominantly private individual sources. The donated equipment included: infra-red instrumentation,

solar collectors, high-power illuminators, survival gear, guns and ammunition, a pneumatic boat, food and medical supplies, numerous data-collection devices and the use of a twin-engine STOL aircraft.

The American expedition members departed for Africa on September 7th, for Brazzaville via Ghana. The constituent team was the director (H. Regusters), a medical officer (Dr. K. VanDusen-Regusters), and a professional photographer (D. Switzer). During a brief stop in Ghana, an invitation was extended to a former member of the Department of Game and Wildlife, Kwabena Amenkwah, to participate in the expedition as a fauna expert and a representative of his country. The invitation was accepted, and he later joined the group in Brazzaville.

Upon arrival in Brazzaville, République Populaire du Congo, a presentation covering the plan and scope of the expedition was made at the Ministry of Water and Forests to Minister Henri Djombo and his staff. At his suggestion, the expedition was reconstituted on September 30th, as a joint American-Congolese undertaking with Regusters as the Director. The plan was also signed and endorsed by the Ministries of National Education, Environment and Tourism, Art and Scientific Research, and the University of Ngouabi. Under this agreement, two Congolese nationals were designated to participate: the Director of Animal Management for the Congo, Serge-Etienne Mingouolo, and the chief Game Control Officer for the Likouala Region, Djoni Jose Bourges. Both possessed extensive experience with the northern forest regions and its fauna. They were to also function as official government representatives in the interpretation and handling of administrative and tribal custom matters.

Arrangements were made with a privately owned and operated company, Aeroservice, to transport the expedition team to Epena, the gateway to the northern bush country, about 500 miles north of Brazzaville. On October 9th, the group departed Maya-Maya airport by charter aircraft at 0800. From Epena, the team would travel southwest on the Likouala River by dugout, to the village of Boha, and from there some 65 kilometres on foot through swamps and forests, to arrive at Lac Tele on October 27th. Thirty two days were spent on site at the lake, and over sixty days altogether in the bush. The return to Maya-Maya was made on December 9th.

Conclusions

1. It is the overwhelming conclusion of the participants of this expedition that some unidentified type of animal inhabits the Lac Tele vicinity and possibly exists throughout the entire forest region of the

Likouala. It would seem unreasonable to suppose that the various accounts of sightings and of related incidents are being fabricated for the purpose of amusing or accommodating a few investigators. In addition, much added weight is given by the testimony of high government officials who have nothing to benefit through such distortions. The majority of the invalid data is being generated by the designs and self-interest of foreign investigators. Among these is the continued promotion of forest-dwelling pygmies as a source of invalidatable information, in a region where it has been established that, at this date, any such people remaining are inaccessible.

2. So little is known concerning the interior regions of the Congo jungles that no conclusive declaration can be extended by any branch of science regarding the real probabilities of the existence of any number of unknown creatures. The vast areas yet to be explored could support large numbers of unknowns, as evidenced by the okapi and its discovery in the early part of this century.
3. The Lac Tele area offers an immense arena for the continued study and observation of many types of animal, fish and plant life. The area is as yet totally undisturbed by man. The benefits to science far outweigh the apparent problems of journeying into the region, which can be diminished through the employment of an effective mode of air travel to Lac Tele.
4. For the maximum benefit to the Congolese government, all expeditions into the northern regions should be in conjunction and in concert with the appropriate ministries. In addition, all future expeditions should be required to demonstrate a proficient level of medical expertise.
5. With proper development, the Lac Tele region, represents a potential source of economic benefits for the Republic of the Congo.
6. An investigation should be made into the feasibility of extending upgraded medical services to the people of the interior regions, to the benefit of the entire country.

APPENDIX E

Report by Marcellin Agnagna on the Results of the First Congolese *Mokele-mbembe* Expedition, 1983 (edited version of the article published in *Cryptozoology*, Vol. 2, pp. 103-12, 1983).

Introduction

Interest in the existence of an extraordinary animal called Mokele-mbembe has continued since the two recent American-Congolese expedi-

tions (see Roy P. Mackal, J. Richard Greenwell, and M. Justin Wilkinson, 1982, The Search for Evidence of Mokele-mbembe in the People's Republic of the Congo, *Cryptozoology*, Vol. 1: 62-72; see also Herman A. Regusters, 1982, Mokele-Mbembe: An Investigation Into Rumors Concerning a Strange Animal in the Republic of the Congo, 1981, *Munger Africana Library Notes*, Vol. 12(64): 1-27). Evidence found by these expeditions concerning the existence of this animal has greatly interested the international scientific community, particularly since the described morphology of the animal is similar to that of the sauropod dinosaurs of the Mesozoic. As a result of this, a meeting was held in early 1982 to discuss the feasibility of conducting a Congolese government-sponsored expedition to determine the existence of Mokele-mbembe.

The meeting included representatives from the Ministry of National Education, the Ministry for the Promotion of the Arts and Scientific Research, the Ministry of Tourism and the Environment, the Ministry of Water and Forests, and the author, who participated in one of the American expeditions (see Mackal, Greenwell, and Wilkinson 1982, above) as a biologist representing the Congolese government.

The new expedition was originally planned for 1982, but a series of technical, organisational, and financial difficulties rendered this impossible. Consequently, the expedition was rescheduled for April-May of 1983. The expedition, under the leadership of the author, left Brazzaville for the Likouala region on April 3, 1983.

Narrative description

The expedition consisted of the following individuals: Marcellin Agnagna, biologist, Ministry of Water and Forests; Jean Marcel Abesse, zootechnician, Ministry of Water and Forests; Auguste Mfouka, engineer, Ministry of Water and Forests; Serge Etienne Mingouolo, chief technical agent, Ministry of Water and Forests; Marcel Ontsira, Ministry of National Defense; Honore Basso, Ministry of the Interior; and Romuald Ntekissa, Ministry of Information.

The expedition departed from Brazzaville for Epena, located on the Likouala River, where several days were spent preparing for the journey downriver. The district commissioner loaned us a motorised dugout, and we also purchased 200 litres of motor fuel. The team then proceeded by dugout down the Likouala, past the confluence of the Likouala and Bai Rivers, to Bouanila, where we initiated our fieldwork. Following discussions with villagers and dignitaries at Mokongo, we examined the Bolelo pool, in which Mokele-mbembe is said to be found on occasion. Certain indications of the existence of a large animal were uncovered. The second

point of study was Botongo, but no further evidence was uncovered there.

We then proceeded north to Edzama, Dzeke, and finally Boha, the inhabitants of which "own" Lake Tele, one of the reported habitats of Mokele-mbembe. The stay at Boha lasted one week, due to the reluctance of the villagers to cooperate with our expedition concerning our proposed work at Lake Tele. This was partly due to their negative experiences with one of the previous American expeditions in 1981. Finally, after a week of discussion, the villagers acceded to our requests, stating that they were only doing so because our expedition was an official project of the Congolese government. Even so, these disruptions had caused morale problems among expedition participants.

On April 26, the drums were beaten at Boha, while village elders made their ritual prayers invoking the spirits of their ancestors to protect the expedition members and ensure the success of the mission to Lake Tele. The expedition then set out on foot, accompanied by seven villagers from Boha who were to act as guides in the forest. The trail through the forest proved to be quite difficult and it was usually necessary to cut through the foliage to allow passage. It being the dry season, water was scarce, and it became necessary to drink from muddy pools.

The 60-kilometre trek to Lake Tele was completed in 2 days, and it was with some emotion that we finally looked across this little sea, located right in the heart of the equatorial forest of Central Africa. The lake is oval in shape, about 5 kilometres by 4 kilometres. A base camp was established at the water's edge, and one of the Boha villagers caught a large turtle which served as dinner that first night. Two days of intensive observing of the lake produced no sightings of the supposed Mokele-mbembe, although there were frequent observations of a large turtle, with a shell reaching 2 metres in length.

On May 1, 1983, the author decided to film the fauna in the low-canopy forest surrounding the lake. This forest is a habitat for many mammalian and bird species. The author and two Boha villagers, Jean Charles Dinkoumbou and Issac Manzamoyi, set out early in the morning. At approximately 2:30 p.m., the author was filming a troop of monkeys. One of the villagers, Dinkoumbou, fell into a pool of muddy water, and went to the edge of the lake to wash himself. About 5 minutes later, we heard his shouts to come quickly. We joined him by the lake, and he pointed to what he was observing, which was at first obscured by the heavy foliage. We were then able to observe a strange animal, with a wide back, a long neck, and a small head. The emotion and alarm at this sudden, unexpected event disrupted the author's attempt to film the animal with a Minolta XL-42 movie camera. The film had been almost

totally exposed already, and the author unfortunately began filming in the macro position. By the time this was realised, the film had been totally exposed, as determined by subsequent processing in a French laboratory.

The animal was located at about 300 metres from the edge of the lake, and we were to be able to advance about 60 metres in the shallow water, placing us at a distance of about 240 metres from the animal, which had become aware of our presence and was looking around as if to determine the source of the noise. Dinkoumbou continued to shout with fear. The frontal part of the animal was brown, while the back part of the neck appeared black and shone in the sunlight. The animal partly submerged, and remained visible for 20 minutes with only the neck and head above the water. It then submerged completely, at which point we trekked rapidly through the forest back to the base camp, located 2 kilometres away. We then went out on the lake in a small dugout with video equipment to the spot where we had observed the animal. However, no further sighting of the animal took place.

It can be said with certainty that the animal we saw was Mokele-mbembe, that it was quite alive, and, furthermore, that it is known to many inhabitants of the Likouala region. Its total length from head to back visible above the waterline was estimated at 5 metres.

The expedition's return to Boha through the same forest route took place on May 3, 1983, and we then proceeded back to Epena. Because of the remoteness of the Likouala region, we had great difficulty in returning to Brazzaville. After waiting for a week for the plane to pick us up at Epena, we were finally forced to trek over 100 kilometres through dense forests and swamps to Impfondo, on the Ubangi River, where there is a regular flight to Brazzaville. The trek to Impfondo proved to be a difficult and exhausting experience. The expedition formally terminated on May 17, the date of our return to Brazzaville. The entire expedition had taken 45 days.

Results

The fauna of the Congo is still relatively unstudied. No thorough research in the area has ever been undertaken, and no comprehensive publications on the subject have appeared. The Likouala region, and more specifically the Epena district, with all its swamps and forests, remains almost entirely unfrequented by man. Because of the inaccessibility of the area, the zone has become a refuge for certain animal species, many of which were observed during the course of the expedition. Herds of buffalo (*Syncerus caffer*), ranging from five to 20 individuals,

are found in the area of Mokongo. The buffalo population is quite dense in this region compared to other parts of the country, where it is becoming rare. The forest elephant (*Loxodonta africana cyclotis*), is still abundant, as it has been able to avoid most human contact. At Edzama, herds of between five and 15 individuals may be seen. Most primates withdraw into the forests and rarely show themselves in the areas of the villages or the rivers. The Western lowland gorilla (*Gorilla gorilla gorilla*) is still quite abundant in the Likouala region, including the swampy areas around Lake Tele.

The avifauna is quite varied and largely represented by ciconiiforms (herons, storks, and bitterns), falconiforms (fish eagles and black kites), pelicaniforms (cormorants), and some anseriforms. Marabou storks are present in significant numbers, and groups of up to 100 birds were seen on the sand banks at Mokongo. Reptiles are abundant in the Likouala, and crocodiles may be seen sun-bathing on the sand banks. It is worth noting that crocodile hunting has diminished in this area because of a decrease in the purchasing of skins. In summary, the Likouala region remains one of the richest areas in terms of fauna, almost all known Congolese species being represented there, and the density of the populations is quite high. It is also suspected that the size of certain specimens observed in the Lake Tele area surpass that of the standard, turtles being one example.

It was verified that Lake Tele is generally quite shallow, with a depth of about 2-3 metres. In certain areas, deep holes are found, reaching approximately 6 metres in depth. The water is dark, due to rotting vegetation, and visibility underwater does not exceed 50 centimetres. The bottom is muddy, with the layer of mud estimated at 70 centimetres in the middle of the lake and, at most, 150 centimetres around the sides. Various inlets of the lake branch off into small forest rivers, but these eventually terminate in thick vegetation.

Besides the known fauna of the region, there are many stories of encounters between local inhabitants and strange animals. It appears that the accounts of Mokele-mbembe in the past have been based on actual occurrences, but the witnesses have left no written accounts for subsequent generations, oral accounts being the main form of information transmission in the area. With this current expedition, the situation has changed in that a trained biologist can now report his observation of one of these animals. And this individual is also acquainted with the known fauna of the Likouala.

Besides the sighting of Mokele-mbembe by the author and two other witnesses, additional information of interest was obtained from villagers in other areas. One account concerned an event which took place in

May, 1980, near the village of Mokongo. The witness noticed that the water had become murky in the area in which he was fishing, and that branches and leaves were floating on the surface of the river. Upon inspection, he found that trees and bushes had been dislodged from the riverbank, as well as large lumps of earth. A large animal was then observed in the water, but the morning mist made it impossible to distinguish its form. The destruction supposedly caused by this animal was observed by the expedition members. Apparently, according to different villagers, this phenomenon has occurred a number of times over the years.

Another event related to us occurred near Edzama just 2 weeks before our arrival. A village girl was returning home when her dugout became stuck on a sand bar. She pushed against the obstruction with her paddle, and found the dugout being forced against the sand bar once more. A large animal then appeared, creating a large disturbance on the water's surface. She was unable to distinguish the head or tail of the animal, but later indicated that the bulk observed was the size of four forest elephants (which are smaller than the more commonly known African bush elephant). The girl was in a state of shock and was crying for help, and she was later rescued by her parents. Our inspection of this sand bar indicated that it had been well-swept by some agency, as if an animal had, in fact, been resting and moving a bulky body about on the sand. At Dzeke, we found unidentified footprints in the same location as where the Mackal expedition found the trail of a large, unknown animal (see Mackal, Greenwell, and Wilkinson 1982, above). The prints were very recent, no older than 4 days, and we were able to follow them for over 200 metres right to the edge of the water in the company of an elephant hunter, Immanuel Mongoumela, the same individual who had shown the trail to the Mackal expedition. This same individual reported that, since the Mackal expedition had been there, he had observed, on three separate occasions, a long-necked animal eating vegetation while submerged in the water. Only the neck of the animal had been visible as it consumed leaves and fruit. He identified the plant eaten as the Mabondji, and also the fruit of the Malombo (see Charles W. Weber, James W. Berry, and J. Richard Greenwell, 1982, Mokele-mbembe: Proximate Analysis of Its Supposed Food Source, *Cryptozoology*, Vol. 1, pp. 49-53). Mounougoumela is one of the few witnesses who remains unmystified by the presence of these animals. He considers them as natural to the ecology of the area as others he encounters. It should be noted that he has been an experienced hunter for over 30 years.

In summary, it can be concluded that the first Congolese expedition in search of Mokele-mbembe was highly successful. The animal itself was

observed at Lake Tele, and evidence supporting the existence of other individuals in the Likouala region was obtained. Fieldwork was conducted under relatively favorable conditions, it being the dry season; this increased our ability to observe, unlike with the Mackal expedition, which operated during the rainy season. The scientific team, however, was incomplete, since only one biologist was present, and he had to undertake all the faunal studies on his own. Other expedition members were concerned with botanical aspects and with security.

There was also the problem of obtaining correct information from the local inhabitants, who are always reticent about giving this for fear of falling ill or even dying; their tradition dictates this. It is clear that the inhabitants of the region are well aware of the existence of these extraordinary animals. If these animals are indeed surviving sauropod dinosaurs, it would be further indication that the Likouala region and other similar regions in Central Africa have undergone no important geomorphological and ecological changes since the Cretaceous.

APPENDIX F

Report on Footprints Photographed and Described by Atelier Yvan Ridel (edited, with commentary, by R. P. Mackal).

The following report and photographs were transmitted to Bernard Heuvelmans and myself for our consideration. Mr. Ridel is a professional French wild-life photographer. Both Heuvelmans and I consider him completely reliable. The footprints are particularly relevant to the *Emela-ntouka*, rather than to the *Mokele-mbembe* proper.

A relevant excerpt from Bernard Heuvelmans's letter to me follows:

"I answered this (Ridel) letter with my comments, saying that the photographed footprints could not have been made by a hippo, that it looked superficially like a rhino footprint, but that its middle-toe imprint looked much more acute, sharper than on a rhino's footprint. I added that, as my correspondent certainly knew, no rhinos were known to be found less than 1000 miles away from the Congo. However, I have a whole dossier about the existence of a pygmy (actually a little smaller than the black one) forest rhino allegedly living in Liberia, eastern Cameroon, around the Middle Congo River and even in Gabon.

If such an unknown species of rhino existed, and lived in the Great Equatorial Rain-forest, and thus probably on marshy soils, it could have developed more elongated hooves, just as the Sitatunga or Waterkuda (*Tragelaphus spekei*), when compared to the other *Tragelaphus* (Kudus and Myalas). All the same, the discovery of such a large unknown animal would be of great importance for zoology.

In his second letter (dated March 12, 1984), Yvan Ridel gave more details on the exact location of the place where he had discovered a whole trail of footprints, of which he unfortunately had only photographed the clearest one. However, he remembered vaguely that the stride of the animal was about 1.2 metres (that is, 4 feet) long and that the legs seemed also to be 1.2 metres apart. But what was much stranger is that the trail had obviously been made by a biped!

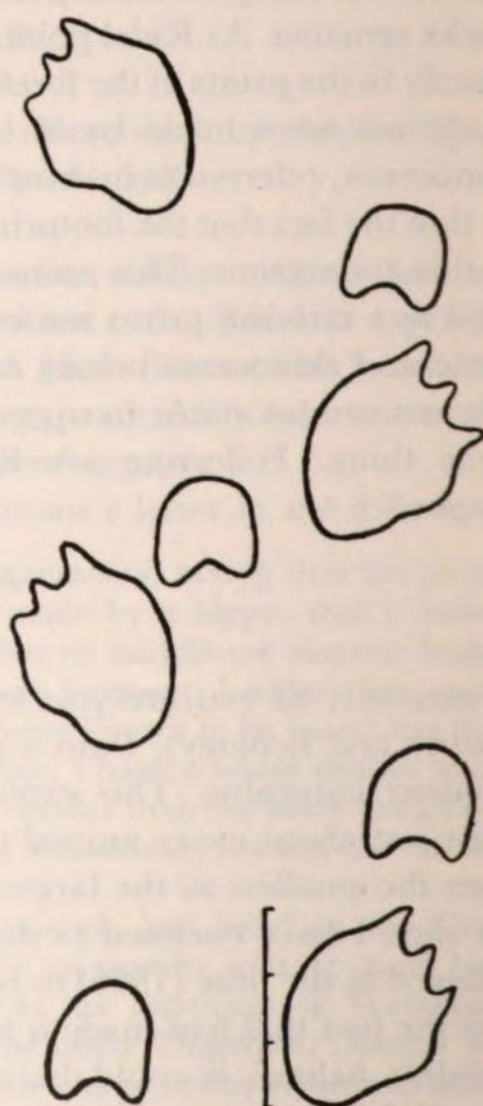
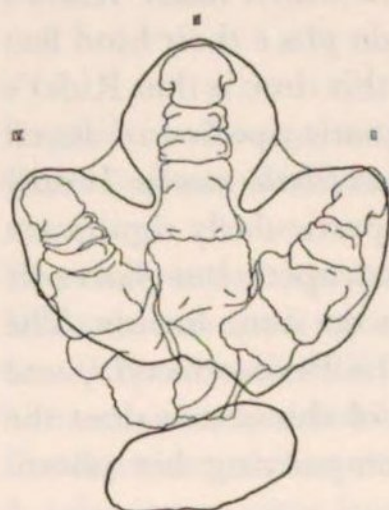
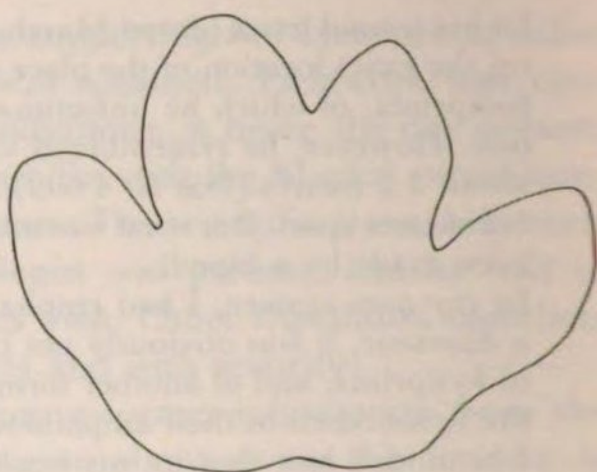
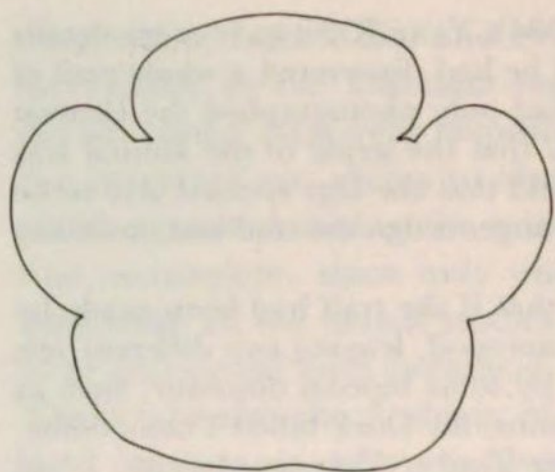
In my own answer, I had emphasised that if the trail had been made by a dinosaur, it was obviously not by a Sauropod, leaving two different sets of footprints, and of another form, but by some bipedal dinosaur, such as the Iguanodons or their amphibious cousins, the Duck-billed Trachodonts. I reminded him that in my book *On the Trail of Unknown Animals*, I had made the hypothesis that the so-called Congo Dragon could be one of them. In my most recent book on Africa's last dragons, I rather concluded, because of the frequent mention of a long neck, that it was probably a middle-sized Sauropod."

Since I discovered that reports of the *Emela-ntouka*, distinguished by its short head-neck with horn, and the long-necked hornless *Mokele-mbembe* are sometimes confused, the problem of the long neck disappears. The problem of the possible bipedalism of the creature which made Ridel's tracks remains. As Ridel points out, some horses do place their hind feet exactly in the prints of the forefeet. My opinion at this time is that Ridel's footprints were made by an unknown, semi-aquatic species of forest rhinoceros, referred to in some parts of the Congo as *Emela-ntouka*. It may be that the fact that the footprints led into water is particularly significant in this connection. This animal is certainly a quadruped, but places its hind feet into the prints made by the forefeet, as do some horses. The horse and rhinoceros belong to the same order, the Perissodactyla, and it is not unreasonable to suggest that this species of rhinoceros does the same thing. Following are Ridel's letters, accompanying his photographs.

Ridel's Letters

Feb. 21, 1984

A member, as you are yourself, of the J.N.E. (Writers-journalists for Nature and Ecology), I am a professional photographer and passionate amateur naturalist. This explains why I photograph, as the occasions arise just about every animal (wild ones, especially) that I encounter—from the smallest to the largest. This is how I happened to have taken the slide I have enclosed (a duplicate), showing the footprint of what I believed at the time (1966) to be a hippopotamus, without even realizing that the foot that had made it had only 3 toes. But, not thinking that far, I didn't believe it could be anything else, so filed the negative and scarcely thought of it again.



I ought to mention that this photo was taken in August or September of 1966 in the Congo (Brazza) on a steep river bank and that the animal's tracks led out of a mass of reeds, crossed a little beach area and descended into the water. The print I photographed was the clearest. It measured, minus what memory adds after the fact, about 25 cm in width. The tracks had not been there the day before. The ground was very, very compact, and my comrades and I did not leave a single footprint, in the ordinary sense of the term.

It was while reading the *Last Dragons of Africa* that I suddenly remembered that this "animal" only had three toes.

The river in question flows through the middle of an equatorial forest, away from any rhinoceros biotope*; it seems to me, by the way, that the latter has wide, rounded nails**.

Even if this footprint is banal, what animal does it belong to? If it what you've been looking for, I could provide you with additional information. What do you think of it? I would be grateful if you would give me your opinion. With this hopeful expectation, I send you, Sir, my best regards ... etc.

1. See enclosed colour print.

2. See enclosed outline of hippo footprint.

* And the closest area where rhinos (black ones) are known to live is at least 1000 miles away (in N. Cameroon, Central African Republic and Chad).

** See enclosed outline of rhino footprint.

April 15, 1985

Here is a series of black and white prints for Mr. Mackal. I'd appreciate it if you let me know his reaction.

63. Correlation of the bones of the hind foot of a hadrosaurian dinosaur with a footprint found in the same sediments in which the bones were preserved. About 5% of the natural size.

64. Outline of the footprint made by the right front leg of the black rhinoceros, *Diceros bicornis*.

65. Outline of the footprint made by the right front leg of *Hippopotamus amphibius*.

66. Footprints of a giant sauropod dinosaur from the Lower Cretaceous rocks of Texas. The smaller prints are of the front feet, the larger ones of the hind feet. A three-foot scale is shown.



67. Site where unidentified three-toed footprints were discovered and photographed by Yvan Ridel.

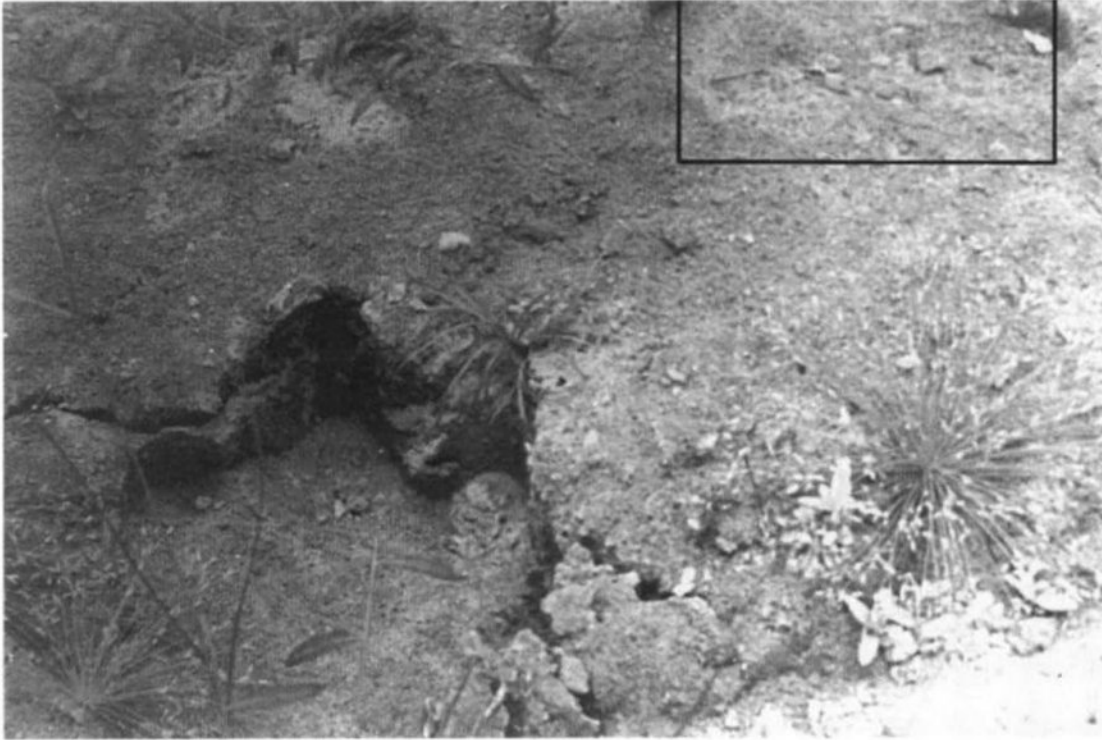
68. Overview of area where Ridel discovered and photographed strange, unidentified animal tracks.

The arrangement of the footprints in question is either that of a biped or, at the limit, that of a quadruped which places its hind paws exactly in the prints of the forepaws, as do some horses.

My sincerity is absolute; however, the lapse of 18 years could have marred my memory of certain details. As for the obstinate disbelievers, I have a feeling that nothing could make them change their minds, apart from the actual capture of an animal. Even before a cadaver, certain people would no doubt find it necessary to say that it had been miraculously preserved since the Mesozoic era!

Concerning the tracks, I maintain what I indicated to you, although it would be purely subjective after 18 years. In fact, in my mind, as well as in my dictionaries, a *step* is the distance that separates the *two feet* in the act of walking. The same is true of the English word *stride*, for which I find the translation *enjambee*. I'm not saying this to contest your way of considering a step (two successive positions for the foot in the act of walking), but rather to clarify our discussion. By the way, I have just noticed that my evaluation moreover concurs exactly with the statements made by the Abbé Proyart, which you quote on page 249 of *The Last Dragons of Africa*: '...and that it moved its paws a distance of 7 or 8 feet apart (2.1 m to 2.4 m).'

I would very much like to have a copy of M. Agnagna's article about his expedition, if you wouldn't mind sending me one, for there's a gentleman who says he observed the animal seven minutes, I believe he said, but didn't bring back even a big photo of it! That seems rather strange.



69. Photograph showing position of second animal footprint (upper right-hand corner) relative to the other foot (left-hand corner).

For the sake of comparison, would you happen to have the negative of an iguanodon footprint?

The site of my finding was located $12^{\circ} 6'$ east and $4^{\circ} 6' 30''$ south. On the map = planimetric sketch of Central Africa, with 1/200,000k; Congo Republic Sheet SB-33-1 Dolisa, Congo Republic Sheet SB-32-VI p^{te}-Noire; IGN Paris Annex of Brazzaville.

For whatever it might have been worth, I had photographed a crocodile the same day at the same spot (though in the water), which seemed to be (mediocre negatives) an *Osteolaemus tetraspis*. This could be a factor in the ecology of the animal we're interested in.

While waiting eagerly to hear from you, I send my best regards ... etc.

APPENDIX G

Report by Guy de la Ruvière on the Saurian of the Maika, with an Additional Discussion By R. P. Mackal.

The following report was transmitted to Bernard Heuvelmans and myself for our interest by Guy de la Ruvière. He has spent many years in the Congo (Zaire) and in the Sahara, Chad, Cameroon, Kenya, Tanganyika and Rhodesia in a variety of capacities. Heuvelmans's personal opinion is that Ruvière as a reporter is completely reliable.

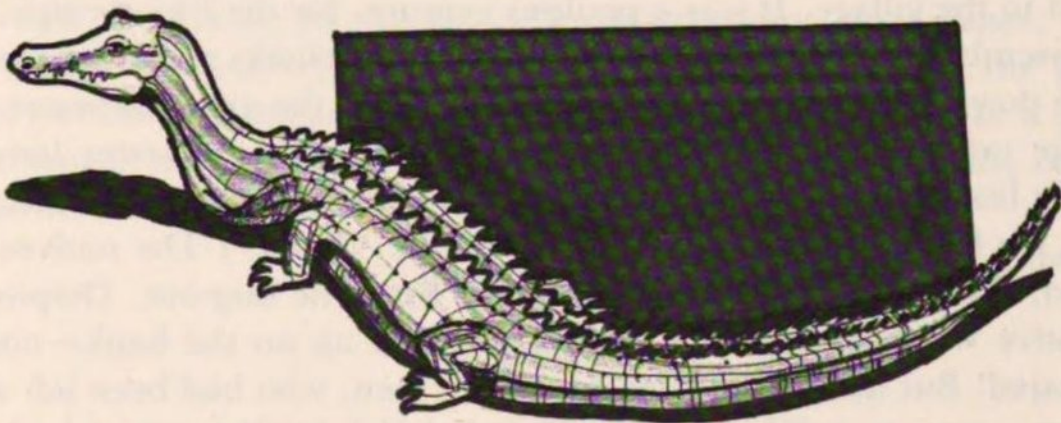
The Saurian of the Maika

Eastern Province (Province Orientale). Paulis Territory. Approximate co-ordinates: 28° E Longitude, 2° 45' N Latitude.

The marshes of the Maika are located southeast of the Paulis Station in the triangle PENG-~~E~~-GAO-MUNGBERE-BOBOMBI-BOMA. They also stretch a little way to the northwest towards the source of the Nava River which flows out of them.

My observations were made in the year 1954. I was buying some palm fruits for an oil-mill and had gone, notably, to the village of Mambunga. Certain natives from the interior were always the last to arrive at the market, and very often I had to wait for them. When I asked the reason, I was told that "they had to wait for the 'Nyama monene' or the 'Ngonde monene' (Ngonde = crocodile, Nyama = animal) to move away from the footbridge they used to cross the marsh! I was unaware of the importance of this at the time. But intrigued, I asked for more information. Unfortunately, the natives were all quite frightened; no one could give me even a slightly detailed description. They seemed to agree only on the following points: its head was like that of a crocodile, but much larger and wider; its tail and more agile body also seemed much longer than a crocodile's. According to their account, the animal would not allow one to get within less than a hundred metres of it; the natives would perceive it only at dawn or dusk and only through a patch of fog which floated permanently on the surface of the water. Never had the animal attacked a human, although pieces of the dead bodies of the Cobs or Lechwe had frequently been found in the marsh, as well as those of Potamochores, who are so numerous in this region. In answer to my question, the natives told me that the animal would manifest its presence by creating great eddies in water and that it would strike the surface with its tail and raise its head out of the water,—quite an unusual act for a crocodile. Since I was staying at the Gite d'Etape (way station) of Mambunga, I decided to go there to have a look for myself. I had a lot of trouble convincing a few men to go along; fortunately, I always had with me two of my "brothers" (as companions), who are not afraid of anything. I equipped myself with binoculars, a powerful flashlight, a head lamp, and a revolver (just in case!) and a lot of patience. I was counting on borrowing a dug-out as a possible means of pursuing the animal. A fearful and obstinate refusal was all I obtained despite my tempting offers!" "Adjali Mungu ya Mai" (it's the god [spirit] of the water), I was told; "it must be left alone". Besides all of which, this marshland did not really have an

appealing appearance! Greenish stagnant water, its surface covered with plants—water hyacinths, rotting tree trunks—and its banks totally unpredictable and fluctuating. On the water's surface a sort of whitish mist was constantly present, like a cluster of long filaments. A total silence reigned, scarcely broken from time to time by the calls of fish eagles. Hardly an inviting atmosphere! Nothing moved. From 5:30 p.m. to 6:30 p.m., absolutely nothing happened. Not a soul, not an animal... The next day, a Sunday, I went back there very early, at dawn, in the cold. This time I stayed 500 metres away from the footbridge crossing this part of the marsh. My two men and I took turns, keeping watch through the binoculars. It was not until the sun first appeared on the horizon that one of my men touched my arm and pointed to the middle



70. Sketch of the *Nguma-monene* after a drawing by Guy de la Ruvière.



71. Reconstruction of the appearance of the *Nguma-monene* based upon Guy de la Ruvière's description and sketch.

of the water. A long, stretched-out form was gliding along quite rapidly 100 metres away. If it was a crocodile, it was certainly much larger than the largest I had seen, notably at Bondo L'Uele where one was longer than a dug-out, that is, about 7 metres. Visibility was very limited because of the mist. The only unusual aspect of the animal's behaviour, in relation to that of a crocodile, is that at regular intervals, it would raise its head! A very large head, lifted out of the water, making visible an abnormally long neck and allowing the head to turn somewhat from left to right! Wanting a better look at it, I lit my headlamp. As soon as the beam of light reached it, there was a terrible eddy; the animal turned around and the tail appeared a brief instant out of the water. Then the whole of the animal disappeared into the water. The waves created by its change of position were so large that they splashed us! That was all I was able to see that day—at least, that morning.

In the afternoon, I decided to take the same footbridge across the marsh to get to the village. It was a perilous venture, for the "footbridge" was in miserable shape in a few spots! The lack of planks made it necessary to go down a few times, right to the surface of the greenish water. The village only owned two dug-outs, one a normal 4-5 metres long but visibly leaky, the other one minuscule, narrow and unstable. Truly not ideal for facing the eddies stirred up by the "beast"! The natives only fished, moreover, with ledger lines cast from the dug-out. Despite our attentive watch and even a bait—a dog tied up on the bank—nothing appeared! But three days later one of my men, who had been left at the village, came to notify me that during the night the animal had gone under the footbridge and was now in a new place. I went immediately to this area of the swamp. Here the water was even more cluttered with dead trees, which would perhaps make it possible to move in more closely than before. I had to contend here with veritable clouds of ... bats! A true setting for a horror movie! Our wait was in vain, but we did find the torn-up body of a male Cob who had died the night before and whose backside was missing.

Two days later the natives themselves came to warn me that the "Ngonde" was there, swimming peacefully one kilometre to the right of the footbridge. It took me a good hour of wading through mud before I reached the spot and managed to climb a tree, where I positioned myself with my Azaldens. Just as we had been told, a long, greyish form was stretched out, immobile, 80 metres away, under a tree. The animal, about 8-9 metres long, with an extremely long snout, could be seen on the surface of the water (with a common crocodile, one generally sees only the nostrils). The body was still and seemed to float. I was able to observe it for only about 10 minutes, and the three pictures I took at this

time did not turn out, because of the dimness of the light and the lack of a telephoto lens. Four days later I saw the strange dinosaur again for the last time, after having been alerted by the natives that it was fighting with another animal!! Despite my diligence, I could only make out through my binoculars the tail lashing about in the water. For an instant it appeared above the surface, striking the air; the great snout was also raised, exposing a neck much longer and more agile than that of a normal saurian. The snout seemed to be holding something as it lashed about violently from left to right. Suddenly, the entire animal disappeared in a great eddy. Despite further searching, we were unable to find a single trace of the "victim"!

I never saw the animal again; in fact, I left the area at the end of the month when the market period ended.

The Hunting Director of Gangala-na-Bodio had been alerted. Shortly after my departure, a team of "hunter-trackers", led by an officer, spent two weeks, I believe, in the area. Despite constant surveillance, they were unable to observe more than I had, and it seems that the great mystery of the "giant saurian" remains unsolved. It would take a great investment of time and money to investigate this rather fantastic region ... but the animal exists.

Guy de la Ruvière

Additional Note from Guy de la Ruvière

I. The Giant Dinosaur (*Ngonde Monene* in Bangalla)

Here's my rather awkward sketch. Please excuse my drawing!

The principal characteristics of the animal are as I explained in my report. First, the bizarre neck which is longer than that of normal crocodiles and saurians. It looked like a swollen throat but tapered off toward the very wide flat mouth. The protuberance of the eyes and nostrils was very visible. Also, the teeth of the lower jaw were larger than normal and were rooted in the upper lip.

I've found a note in which I had written at the time: "It would seem that all along the back a row of scales stand out very prominently. The tail is longer than usual and tapers to a fine point, and the centre line of scales are very large, like the teeth of a saw, and are imbricated in the direction of the tail."

Because of its mobility, the head of this "phenomenon" could, at the end of this long neck, turn easily from side to side, even in the water, or rise to observe the riverbank.

Among the biggest and most beautiful crocodiles I have ever seen, either in the Dele or the Nile a few measured over 7 metres. But this one, in my opinion, had to have been a good 9 metres long.

Discussion

What are we to make of Guy de la Ruvière's observations and report? A creature such as he describes could account for the animal seen by Pastor Ellis very well—the serrated back, 9 metres (30 feet) showing. Just as well, the animal might be the same as the *Nguma-monene* or the *Mahamba*.

Mr. Ruvière's information has been studied by Doctor Jean Garzoni, a field herpetologist and Director of the Lausanne Vivarium in Switzerland; in his opinion the creature in question is simply an oversized Nile crocodile. Dr. Bernard Heuvelans concurs with the identification, pointing out to me that the neck of such a reptile can, of course, be turned freely and be seen sometimes above the water especially at pairing time. This seems to be confirmed by the inflated throat which is apparent when the animal is loudly bellowing its love call. M. Garzoni even thinks that the exaggerated length of the animal could have been produced by the sight of two mating crocodiles in a turmoil of splashing. Such then is a conservative assessment of the Saurian of the Maika. On balance, I am inclined to agree and if this were the only report, I would agree without qualification. However, the "two animals together" hypothesis cannot explain Pastor Ellis's 9-metre (30-foot)-plus creature, unless we are prepared to accept a 9-metre (30-foot) length for a Nile crocodile.

The last point to be made is that most eyewitness informants, including Ruvière, were familiar with crocodiles, and so it seems strange that all should be misled simply because of size. In my opinion, the idea that this creature is similar to, but not identical with, the Nile crocodile must be retained as a viable possibility. A rare new species of lizard-like crocodile or a very large aquatic monitor lizard cannot be excluded.

Bibliography

"MONSTROUS ANIMAL" OR LIVING DINOSAUR?

- Balandier, Georges. *Daily Life in the Kingdom of the Kongo*. Cleveland, Ohio: World Publishing Co., 1969 (passim).
- Crabites, Pierre. *Gordon, the Sudan, and Slavery*. London: George Routledge & Sons, 1933 (p. 33).
- Goldsmid, Edmund (trans.). *Un-Natural History of Myths of Ancient Science*. Edinburgh, 1886 (pp. 49-70).
- Hagenbeck, Carl. *Beasts and Men*. New York: Longmans, Green, & Co., 1912 (pp. 96-7).
- Heuvelmans, Bernard. *Les Derniers Dragons d'Afrique*, 1st volume of a series entitled *Bêtes Ignorées du Monde*. Paris: Plon, 1978 (p. 249).
- Heuvelmans, Bernard. *On the Track of Unknown Animals*. New York: Hill & Wang, 1959 (pp. 461-82).
- Horn, Alfred Aloysius. *Trader Horn* (edited by Ethelreda Lewis). New York: Simon & Schuster, 1927 (pp. 257-9).
- Kohl-Larsen, Ludwig, and Kohl-Larsen, Margit. *Die Bilderstrasse Ostafrikas*. Kassel: Erich Röth Verlag, 1958 (p. 37).
- Ley, Willy. *The Lungfish, the Dodo, and the Unicorn*. New York: Viking Press, 1948 (pp. 156-70).
- Mackal, Roy P. *The Monsters of Loch Ness*. Chicago: Swallow Press, 1976 (passim).
- Pope, Marvin H. *Job*. New York: Doubleday & Co., 1965 (p. 266).
- Proyart, Abbé Liévain Bonaventure. *Histoire de Loango, Kakongo, et autres Royaumes d'Afrique, rédigée d'après les Mémoires des Préfets apostoliques de la Mission française*. Paris: C.-P. Berton & N. Crapart, 1776 (reprinted by Gregg International Publishers Ltd. 1968) (pp. 38-39).
- Schomburgk, Hans. *Wild und Wilde im Herzen Afrikas*. Berlin: Egon Fleischel & Co., 1910 (pp. 219-20).
- Summers, Roger (editor). *Prehistoric Rock Art of the Federation of Rhodesia and Nyasaland*. Rhodesia and Nyasaland: National Publications Trust, 1959 (pp. 28-29, 194).

THE EVIDENCE ACCUMULATES

- Mackal, Roy P. *Searching for Hidden Animals*. New York: Doubleday & Co., 1980 (pp. 59-75).

MORE EVIDENCE

- Du Chaillu, Paul. *Adventures in the Great Forest of Equatorial Africa and the Country of the Dwarfs*. New York: Harper & Brothers, 1903 (passim).
- Duncan, John. *Travels in Western Africa, 1845 and 1846*. London: Richard Bentley, 1847 (passim).
- Fawcett, Lt.-Col. P. H. *Exploration Fawcett. Arranged ... by Brian Fawcett*. London: Arrow Books, 1968 (pp. 104, 107, 152-53, 225).
- Gwynn, Stephen. *The Life of Mary Kingsley*. London: Macmillan & Co., 1932 (passim).
- Heuvelmans, Bernard. *Les Derniers Dragons d'Afrique*, 1st volume of a series entitled *Bêtes Ignorées du Monde*. Paris: Plon, 1978 (pp. 116-21, 126-34, 159, 178, 185, 204, 223, 296, 308, 356).

- Heuvelmans, Bernard. *Les Bêtes Humaines d'Afrique*, 2nd volume of a series entitled *Bêtes Ignorées du Monde*. Paris: Plon, 1980 (pp. 301-304, 314-15, 327, 419, 421, 423, 427, 437-439, 447, 452, pl. 37, C. II).
- Heuvelmans, Bernard. *On the Track of Unknown Animals*. New York: Hill & Wang, 1959 (pp. 434-41).
- Kingsley, Mary H. *Travels in West African: Congo Français, Corisco, and Cameroons*. London: Frank Cass & Co., 1965 (passim).
- Kingsley, Mary H. *West Africa Studies*. London: Macmillan & Co., 1897; Virago Press, 1982 (passim).

MOKELE-MBEMBE: WHAT COULD IT BE?

- Desmond, Adrian J. *The Hot-blooded Dinosaurs*. New York: Dial Press/James Wade, 1976 (passim).
- Grzimek, H. C. Bernhard (editor). *Grzimek's Animal Life Encyclopedia*. Vol. 6. New York: Van Nostrand Reinhold Co., 1975 (pp. 57-59, 64).
- Hichens, William. African Mystery Beasts. *Discovery* (for December 1937) (pp. 369-73).
- Kondo, Herbert (editor). *The Illustrated Encyclopedia of the Animal Kingdom*. Vol. 10. Danbury, Connecticut: Danbury Press, 1972 (pp. 7-60).
- Millais, John G. *Far Away Up the Nile*. New York: Longmans, Green & Co., 1924 (pp. 60-64).

EMELA-NTOUKA—KILLER OF ELEPHANTS

- Augusta, Josef, and Burian, Zdeněk. *The Age of Monsters*. London: Paul Hamlyn, 1966 (pp. 22-43, pls 8-10, 12, 13).
- Colbert, Edwin H. Evolution of the horned dinosaurs. *Evolution*, 2 vols. Lancaster, Philadelphia: Society for the Study of Evolution, 1948 (vol. 2).
- Glut, Donald F. *The Dinosaur Dictionary*. Secaucus, New Jersey: Citadel Press, 1972 (pp. 104-108).
- Grzimek, H. C. Bernhard (editor). *Grzimek's Animal Life Encyclopedia*. Vol. 13 (Mammals IV). New York: Van Nostrand Reinhold Co., 1972 (pp. 34-70).
- Hatcher, J. B. *The Ceratopsia*, by J. B. Hatcher ... Edited and completed by R. S. Lull. United States Geological Survey, Monograph No. 49. Washington, D.C.: Government Printing Office, 1907 (pp. 70-97).
- Kurten, Bjorn. *The Age of Mammals*. New York: Columbia University Press, 1972 (pp. 98-99, 113, 137).
- Matthew, W. D. *Critical Observations on the Phylogeny of the Rhinoceroses: a Review of the Rhinoceroses with a description of Aphelops Material from the Pliocene of Texas*. University of California Publications in Geological Sciences, vol. 20, 1931-32. Berkeley: University of California Press, 1932 (pp. 411-44).
- Osborn, Henry Fairfield. The Extinct Rhinoceroses. *Memoirs of the American Museum of Natural History*, vol. 1, pt 3. New York: American Museum of Natural History, March 1898 (pp. 80-164).
- Parker, T. Jeffery, and Haswell, William A. *The Textbook of Zoology*. 7th edition. 2 vols. New York: St. Martin's Press, 1964 (pp. 810-11, 831-36).
- Parkinson, John. *The Dinosaur in East Africa*. London: H. F. & G. Witherby, 1930 (pp. 69, 76-78, 84).
- Romer, Alfred Sherwood. *Vertebrate Paleontology*. 3rd edition. Chicago: University of Chicago Press, 1966 (pp. 156, 162-63, 270-72, 329).
- Spassov, Nikolai B. Sexual Selection and the Evolution of Horn-like Structures of Ceratopsian Dinosaurs. In *Paleontology, Stratigraphy, and Lithology*. Vol. 2. Sofia: Bulgarian Academy of Sciences, 1979 (pp. 37-480).
- Wood, Horace Elmer. Some Early Tertiary Rhinoceroses and Hydracodonts. In *Bulletins of American Paleontology*. Vol. 13, No. 50. New York: Harris Co., 1927 (pp. 165-265).

Wood, Horace Elmer. Trends in Rhinoceros Evolution. *Transactions of New York Academy of Sciences* (Ser. 2), Vol. 3, No. 4. New York: Academy of Sciences, 1941 (pp. 83-96).

MBIELU-MBIELU-MBIELU—THE ANIMAL WITH PLANKS GROWING OUT OF ITS BACK

- Frobenius, Leo. *Die Afrikanischen Felsbilder, Madsimu Dsangara Südafrikanische Felsbilderschronik*. Band 1. Graz/Austria: Akademische Druck- u. Verlagsanstalt, 1962 (p. 22, pl. 60).
- Halstead, L. B. *The Evolution and Ecology of the Dinosaurs*. London: Eurobook, 1975 (pp. 16, 18, 62-64, 72, 82).
- Lambert, David. *Dinosaurs*. New York: Crown Publishers, 1978 (pp. 61, 88).
- Man, John. *The Day of the Dinosaur*. London: Bison Books, 1978 (pp. 7, 36, 86-87, 89, 100-102, 118, 126-27).
- Parkinson, John. *The Dinosaur in East Africa*. London. H. F. & G. Witherby, 1930 (pp. 76, 106, 109-10, 112, 137).
- Tweedie, Michael. *The World of Dinosaurs*. New York: William Morrow & Co., 1977 (pp. 76-77, 84-85, 89, 92).

NGUMA-MONENE—THE SNAKE DINOSAUR

- Anon./*Australian Wildlife*. Sydney: Angus & Robertson, 1966 (p. 80).
- Grzimek, H. C. Bernhard (editor). *Grzimek's Animal Life Encyclopedia*. Vol. 6. New York: Van Nostrand Reinhold Co., 1975 (pp. 323-37, 363-80).
- Heuvelmans, Bernard. *On the Track of Unknown Animals*. New York: Hill & Wang, 1959 (pp. 434-84).
- Heuvelmans, Bernard. *Les Derniers Dragons d'Afrique*, 1st volume of a series entitled *Bêtes Ignorées du Monde*. Paris: Plon, 1978 (pp. 111-398).
- Hichens, William. African Mystery Beasts. *Discovery* (for December 1937) (pp. 369-73).
- Jackson, H. C. The Nuer of the Upper Nile Province. *Sudan Notes and Records*, Vol. 6, Appendix A. Khartoum, 1923 (pp. 187-89).
- Ley, Willy. *The Lungfish, the Dodo, and the Unicorn*. New York: Viking Press, 1948 (pp. 165-66).
- Millais, John G. *Far Away Up the Nile*. New York: Longmans, Green & Co., 1924 (pp. 64-68).
- Romer, Alfred Sherwood. *Vertebrate Paleontology*. 3rd edition. Chicago: University of Chicago Press, 1966 (pp. 131-35).
- Smith, Robin, and Willey, Keith. *New Guinea*. Melbourne: Landsdowne Press, 1969 (p. 129).
- Worrell, Eric. In *Pacific Islands Monthly*, Vol. 6, No. 2 (for September 1935) (p. 30).

NDENDECKI—A GIANT TURTLE

- Abel, Othenio. In *Lebensbilder aus der Tierwelt der Vorzeit*. 2nd edition. Jena: Gustav Fischer, 1927 (pp. 369-77).
- Anderson, John. *Zoology of Egypt*. Vol. 1, *Reptilia and Batrachia*. London: Bernard Quaritch, 1898 (reprint, 1965) (pp. 32-34, 360).
- Grzimek, H. C. Bernhard (editor). *Grzimek's Animal Life Encyclopedia*. Vol. 6. New York: Van Nostrand Reinhold Co., 1975 (pp. 114-17).
- Harless, Marion, and Morlock, Henry. *Turtles: Perspectives and Research*. New York: John Wiley & Sons, 1979 (pp. 158, 161-62, 182).

MAHAMBA—A GIANT CROCODILE

- Grzimek, H. C. Bernhard (editor). *Grzimek's Animal Life Encyclopedia*. Vol. 6. New York: Van Nostrand Reinhold Co., 1975 (pp. 124-46).

- Kondo, Herbert (editor). *The Illustrated Encyclopedia of the Animal Kingdom*. Vol. 10. Danbury, Connecticut: Danbury Press, 1972 (pp. 52-62).
- Monard, A. Sur l'Existence en Angola d'un Grand Reptile encore Inconnu. *Bull. Soc. Neuchatel Sci. Nat.* vol. 57. Neuchatel, 1932 (pp. 67-71).
- Romer, Alfred Sherwood. *Vertebrate Paleontology*. 3rd edition. Chicago: University of Chicago Press, 1966 (pp. 140-44).
- Steel, Rodney, and Harvey, Anthony. *The Encyclopedia of Prehistoric Life*. New York: McGraw-Hill Book Co., 1979 (passim).
- Werner, J. R. *A Visit to Stanley's Rear-Guard at Major Barttelots Camp on the Aruhwimi with an Account of the River-Life in the Congo*. New York: P. F. Collier, 1889-90 (Chapter 4 p. 125, Chapter 8 pp. 108-109).

NGOIMA—GREAT MONKEY-EATING BIRD

- Bannerman, David. *Birds of Tropical West Africa*. Vol. 1. London: Crown Agents for the Colonies, 1930 (pp. 243-47).
- Du Chaillu, Paul. *Lost in the Jungle*. New York: Harper & Brothers, 1870 (pp. 119-26).
- Grzimek, H. C. Bernhard (editor). *Grzimek's Animal Life Encyclopedia*. Vol. 7 (Birds I). New York: Van Nostrand Reinhold Co., 1975 (pp. 366, 378-79).
- Steyn, Peter. *Eagle Days*. Johannesburg: Purnell Sons South Africa, 1973 (pp. 62-86).

MALOMBO AND OTHER INTERESTING PLANTS

- Engler, H. G. A., and Prantl, K. A. E. *Die natürlichen Pflanzenfamilien*. Teil IV, Abteilungen 1 and 2. Leipzig: Verlag von Wilhelm Engelmann, 1897 (pp. 109-89).
- Gilg, Ernst. *Strophanthus*. (In) *Monographien Afrikanischer Pflanzen-Familien und Gattungen* (edited by H. G. A. Engler), No. 7. Leipzig: Verlag von Wilhelm Engelmann, 1903 (pp. 1-48, pls 1-10).
- Hutchinson, J., and Dalziel, J. M. *Flora of West Tropical Africa*. Vol. 2, Part 1. London: Crown Agents for the Colonies, 1931 (pp. 28-50).
- Livingstone, David, and Livingstone, Charles. *Narrative of an Expedition to the Zambesi and its tributaries; and of the Discovery of the Lakes Shirwa and Nyassa. 1858-1864*. New York: Harper Brothers, 1866 (passim).
- Pichon, M. Monographie des Landolphiées. *Mem. Inst. Français d'Afrique Noire*. No. 35. Dakar: Ifan, 1953 (passim).
- Thiselton-Dyer, W. T. (Editor). *Flora of Tropical Africa*. Vol. 4, Section 1. London: Lovell Reeve & Co., 1904 (pp. 24-231).
- Thonner, Fr. *The Flowering Plants of Africa*. London: Dulau & Co., 1915 (pp. 432-41).

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Dr. Roy P. Mackal is a distinguished biochemist, engineer, and biologist who has spent most of his academic life at the University of Chicago where he obtained his B.A. in 1949 and a Ph.D. in 1953. His biochemical research, much of it DNA-related, has brought him international recognition. As an engineer he has developed numerous technical innovations, including the design and construction of automatic parachute and recovery systems for sounding rockets and a hydrogen-generation device for weather balloons. As a biologist he has become well known for his sometimes controversial involvements with cryptozoology, the recently established science which investigates problems associated with 'hidden' or little-known creatures. A vice-president of the International Society for Cryptozoology, he was Scientific Director of the Loch Ness Phenomena Investigation Bureau between 1965 and 1975. This function and the titles of his previous books, *The Monsters of Loch Ness* and *Searching for Hidden Animals*, sufficiently indicate his dedication to that science to which he brings a healthy and enthusiastic optimism as well as an analytical and practical intellect.

Do strange, large land animals unknown to science exist in remote corners of the globe? Rumours, stories, and reports about queer beasts located in the deadly unexplored swamps of Central West Africa have surfaced periodically for over two hundred years. The Pygmies living in the area describe features which taken at face value are most like a sauropod dinosaur.

These reports have been taken seriously by Dr. Roy Mackal and provoked him to lead two expeditions to look for signs of the huge creature referred to by some Africans as *Mokele-mbembe*. This book describes his expeditions into the Likouala region of the People's Republic of the Congo. They did not result in the capture or undoubted sighting of the *Mokele-mbembe*, but did indicate that large unknown animals await discovery in this region, one of the largest biopreserves in the world, still largely unexplored by westerners.

In addition to the very full account of *Mokele-mbembe*, which Dr. Mackal believes could indeed be a kind of sauropod dinosaur, the book analyses reports of other still-unknown creatures inhabiting the Likouala swamps. These analyses are detailed, thorough, and provocative, leading us to conclude that there may, indeed, be several different members of the animal kingdom awaiting discovery in this vast and inhospitable region.